

Descriptions of North American HYMENOPTERA. in the Collection of the
Entomological Society of Philadelphia.

BY E. T. CRESSON.

(Continued from page 196.)

ICHNEUMONIDÆ.

Genus **MESOLEPTUS**, Grav.

SECTION 1.—Scutellum and abdomen black, margins of the segments

- | | | |
|-------|--|-----------|
| | sometimes pale..... | Sp. 1—7 |
| “ 2.— | Scutellum black, abdomen red or red and black..... | Sp. 8—25 |
| “ 3.— | Scutellum pale or red, abdomen red, or red and black, or
yellowish..... | Sp. 26—30 |

SECTION 1.

1. **Mesoleptus major**, n. sp.

Opaque-black; legs dull rufous; wings hyaline, areolet small, subtriangular and petiolated.

Male.—Opaque-black, clothed with a thin, very fine, short, whitish pubescence, especially obvious on the face; mandibles entirely black; palpi pale; antennæ rather more than half the length of the body. entirely black; tegulæ also black; metathorax finely scabrous, somewhat longitudinally sulcate behind and with a transverse, rather ill-defined carina at base. Wings hyaline, slightly iridescent, nervures and stigma black, the former pale at base; areolet minute, subtriangular, petiolated. Legs dull rufous, all the coxæ and trochanters black. Abdomen elongate, slender, subfusiform; the first segment slender at base, swollen and convex at tip, shining; apical segments broad and subcompressed. Length $4\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

This species makes an oval cocoon, 4 lines long and 2 broad, of a dirty white color with a broad black transverse band near each end.

2. **Mesoleptus annulipes**, n. sp.

Black; spot on mandibles, palpi, tegulæ, 4 anterior coxæ, all the trochanters and annulus on posterior tibiæ, whitish; wings hyaline, areolet minute, oblique, petiolated.

Female.—Black, clothed with a thin, fine whitish pubescence, more obvious on the face; spot on each mandible and the palpi, whitish; antennæ nearly as long as the body, entirely black; tegulæ whitish; metathorax with the elevated lines well defined, the central area large

and subrhomboidal. Wings hyaline, beautifully iridescent; nervures and stigma black, the former pale at base; areolet minute, oblique and petiolated. Legs pale rufous, the four anterior coxæ and all the trochanters whitish; posterior coxæ and tarsi black, the latter whitish at base, the posterior tibiæ white with broad black band at tip and another near the base. Abdomen elongate, slender at base, broad and compressed at tip, the first segment slender at base, swollen and convex at tip; apex of abdomen truncate, the ovipositor subexserted. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Canada West. Mr. B. Billings, Jr.

Resembles *M? validus*, but is at once distinguished from that species by the minute, petiolated areolet of the wings, by the more compressed abdomen, the shorter ovipositor and the different coloration of the legs.

This species makes an elongate-ovate cocoon, 4 lines long by $1\frac{1}{2}$ wide, of a pure white color, with a rather broad black band near each end.

3. *Mesoleptus? validus*, n. sp.

Black: wings hyaline, areolet triangular; legs pale rufous, the posterior tibiæ and tarsi annulated with black and white; basal segment of abdomen much dilated at tip.

Female.—Black, rather shining, robust, slightly pubescent; head and antennæ entirely black, the latter nearly as long as the body; tegulæ pale testaceous; metathorax sulcate behind and transversely aciculate, the elevated lines distinct, the central area not defined. Wings hyaline, nervures and stigma blackish, the former pale at base; areolet rather large, subtriangular, subpetiolated. Legs pale rufous, the four anterior tibiæ and tarsi in front, yellowish-white; posterior coxæ and their trochanters above, black, their tibiæ whitish with a broad black annulus at tip and a narrow one near the base, their tarsi black with the base of the first three joints whitish. Abdomen robust, subfusiform, entirely black; first segment slender at base and much dilated at tip; apical segments broad and subcompressed; ovipositor exserted nearly the whole length of the body, piceous. Length 4 lines; expanse of wings 6 lines.

Male.—Resembles the female, except that the antennæ are longer and the abdomen subcylindric.

Hab.—Pennsylvania. Mr. C. A. Blake.

This may not belong to *Mesoleptus* on account of its long ovipositor and robust basal segment of the abdomen, otherwise it has the characters of that genus.

4. *Mesoleptus tibiator*, n. sp.

Black; most of mandibles, palpi, tegulæ and trochanters, yellowish-white; legs pale yellowish-red, the posterior tibiæ and tarsi black, the former with a broad whitish band; wings hyaline, areolet minute, subtriangular, petiolated.

Male.—Black, opaque, thinly clothed with whitish pubescence, more obvious on the face; most of the mandibles, and the palpi, yellowish-white; antennæ as long or nearly as long as the body, black; tegulæ yellowish-white; metathorax with the elevated lines well defined, the central area moderate, subrotundate. Wings hyaline, iridescent; nervures and stigma fuscous; areolet minute, subtriangular, slightly oblique and petiolated. Legs pale yellowish-red, the trochanters pale yellowish-white, the posterior coxæ entirely black or dull rufous more or less tinged with blackish, their tibiæ black, with a broad whitish band on the middle, their tarsi also black with their extreme base whitish. Abdomen black, slender at base, rather broad and compressed at tip; first segment gradually dilated at the apex, sometimes the apical margin of the 2nd segment is obscurely pale; ventral segments stained with yellowish. Length $2\frac{1}{2}$ —3 lines; expanse of wings 4— $4\frac{1}{2}$ lines.

Hab.—New Jersey (Cresson); Illinois (Dr. Lewis).

Much smaller than *M. annulipes* to which it is closely allied.

5. *Mesoleptus dubitatus*, n. sp.

Black; most of mandibles, palpi and tegulæ, yellowish-white; legs in most part and the apical margins of abdominal segments, dull rufous; wings hyaline, areolet subtriangular, petiolated.

Female.—Dull black, clothed with a thin pale glittering pubescence, which is more obvious on the face and pleura; most of mandibles and the palpi, yellowish-white; antennæ two-thirds the length of the body, entirely black; tegulæ pale yellowish; metathorax with the elevated lines well defined, the central area rather large and subquadrate. Wings hyaline, iridescent; nervures and stigma fuscous, pale at base; areolet small, subtriangular, petiolated. Legs dull rufous, the trochanters yellowish, the tibiæ and tarsi more or less obfuscated; the posterior coxæ, their trochanters above, and the base of their femora within, black. Abdomen rather short and stout, slender at base and becoming gradu-

ally broader and subcompressed towards the tip; black, somewhat shining, the apical margins of all the segments indistinctly dull rufous; ventral segments stained with yellowish; ovipositor exerted about one line. Length $2\frac{1}{2}$ —3 lines; expanse of wings 4— $4\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

Resembles *M. tibiator* in size and form, but the hind tibiae are rufous and the abdominal segments are obscurely tipped with rufous.

6. *Mesoleptus obliteratedus*, n. sp.

Black; mouth, tegulae, four anterior coxae and trochanters and the venter, yellowish; legs pale fulvous; wings hyaline, iridescent, areolet wanting.

Female.—Black, slightly pubescent; most of mandibles and palpi yellowish; antennae nearly as long as the body, black, basal joint beneath and the tegulae yellowish; metathorax with the elevated lines obsolete. Wings hyaline, iridescent; nervures and stigma fuscous, pale at base; areolet wanting. Legs pale fulvous, the four anterior coxae and all the trochanters, yellowish; the posterior coxae, tips of their tibiae and most of their tarsi, black or blackish. Abdomen subfusiform, black, rather slender at base, broad and subcompressed at tip; first segment rather broadly dilated at tip, slender at base; ventral segments yellowish; ovipositor exerted about one line. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

7. *Mesoleptus compressus*, n. sp.

Black; mouth and tegulae yellowish; legs mostly yellowish-red; wings hyaline, iridescent; areolet small, oblique, subpetiolated; abdomen much compressed.

Male.—Black, slightly pubescent; most of the mandibles and the palpi, yellowish; antennae more than half the length of the body, entirely black; tegulae yellowish; metathorax with the elevated lines rather indistinct, the central area small and subquadrate. Wings hyaline, beautifully iridescent; nervures and stigma pale ferruginous, the former pale yellowish at base; areolet small, very oblique and subpetiolated. Legs pale yellowish-red, the anterior pair in front, the trochanters, and the base of the posterior tarsi, pale yellowish; posterior coxae and trochanters above more or less blackish, their tarsi obfuscated. Abdomen slender at base, very broad and much compressed at tip; entirely black, except a very obscure rufous stain on each side of the

third segment; basal segment slightly dilated at tip; beneath, black. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Pennsylvania. E. T. Cresson.

SECTION 2.

8. *Mesoleptus obscurus*. n. sp.

Black: mouth and tegulae yellowish: wings hyaline, areolet minute, petiolated; legs rufous, the trochanters yellowish: abdomen with the tip and sides of the 3rd and 4th segments obscure rufous.

Female.—Black, slightly pubescent, most of mandibles and the palpi, pale yellowish; antennae two-thirds the length of the body, black, the basal joint beneath dull yellowish; tegulae pale yellowish; meta-thorax with the elevated lines tolerably distinct, the central area rather large and subquadrate. Wings hyaline, iridescent, nervures fuscous, pale testaceous at base, costa and stigma pale testaceous, areolet minute, petiolated. Legs rufous, coxae black, the two anterior pairs rufous beneath, their trochanters yellowish, the posterior tibiae and tarsi slightly obfuscated. Abdomen elongate, slender at base, rather broad and sub-compressed at tip; first segment slightly dilated towards the tip where it narrows again to the base of the 2nd segment; apical margins and sides of 3rd and 4th segments obscurely rufous; ventral segments yellowish; ovipositor exerted about one line. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

9. *Mesoleptus argentifrons*. n. sp.

Black: face densely clothed with silvery pubescence: mandibles, palpi, 4 anterior coxae and trochanters, pale yellowish: legs and a band on the 2nd and following abdominal segments rufous; wings hyaline, areolet minute, subtriangular, petiolated.

Male.—Black, clothed with a thin silvery pubescence, very dense on the face; mandibles and palpi pale yellowish; antennae as long as the body, black, the basal joint piceous; tegulae yellow; the elevated lines of the metathorax tolerably well defined, the central area rather large, subtriangular. Wings hyaline, nervures and stigma black, areolet minute, subtriangular, petiolated. Legs pale rufous, the four anterior pair tinged with yellowish; the four anterior coxae and trochanters beneath, yellowish; posterior coxae, their trochanters at base and all the tarsi more or less blackish, the posterior tibiae sometimes tinged with yellow. Abdomen long, slender, subcylindric, rufous; the first,

the second except its apical margin, and a large spot on the disk of all the following segments, black, sometimes the apical segments are obfuscated and the black spots indistinctly defined; apex not compressed; beneath pale rufous. Length $2\frac{1}{2}$ —3 lines; expanse of wings $3\frac{1}{2}$ —4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

10. *Mesoleptus conjunctus*, n. sp.

Black; mouth, tegulæ and venter, pale yellowish; legs pale fulvous, posterior tibiæ with a faint whitish annulus; wings hyaline, areolet triangular, petiolated; apex of the 2nd and 3rd, and sides of the two following abdominal segments, rufous.

♂ ♀.—Black; most of mandibles and the palpi, yellowish; antennæ two-thirds the length of the body in the ♀, and as long as the body in the ♂, entirely black; tegulæ yellowish; metathorax with the elevated lines not well defined, the central area moderate, subquadrate. Wings hyaline, iridescent; nervures and stigma pale fuscous, paler at base; areolet triangular, petiolated. Legs pale fulvous, the four anterior coxæ black, their tibiæ blackish, with a broad obscure, whitish annulus in the middle, their tarsi obfuscated. Abdomen subfusiform, black, slender at base, broad and compressed at tip; basal segment slightly dilated at tip; apical margins of the 2nd and 3rd, and the sides of the two following segments, rufous; ventral segments yellowish, spotted with black towards the apex; ovipositor of the ♀ exerted about one line. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

Allied to *M. argentifrons*, but easily distinguished by the much larger areolet of the wings, and the different coloration of the legs and abdomen.

11. *Mesoleptus Oxylus*, n. sp.

Black; spot on mandibles, palpi, tegulæ and base of four anterior legs, yellow; wings hyaline, areolet small, triangular, petiolated; legs and middle of the abdomen, rufous.

Female.—Black; face and thorax with a slight silvery pubescence; a spot on each mandible and the palpi, pale yellowish; antennæ three-fourths the length of the body, black, the base beneath piceous. Thorax black, the tegulæ pale yellowish, the elevated lines on the metathorax well defined, the central area elongate, moderate, five or six-sided. Wings hyaline, iridescent; nervures pale fuscous, stigma and costa pale testaceous; areolet small, triangular, petiolated. Legs pale rufous,

the four anterior trochanters beneath yellowish, the posterior tarsi obfuscated, pale at base. Abdomen black, the apical half of the 2nd, the 3rd except its base and the 4th segment entirely, rufous, sometimes the base of the 5th segment is also rufous; apex rather broad and compressed; beneath, more or less tinged with yellowish; ovipositor exerted about half a line. Length $2\frac{1}{2}$ –3 lines; expanse of wings 4 – $4\frac{1}{2}$ lines.

Male.—Resembles the female, except that the antennæ are longer, with its basal joint sometimes entirely dull rufous, and the apex of the abdomen subcylindric, scarcely compressed. Length 3 lines.

Hab.—Delaware (Dr. T. B. Wilson); Illinois (Dr. Samuel Lewis).

This seems to be the most common species.

12. *Mesoleptus affinis*, n. sp.

Black; spot on mandibles, palpi, tegulæ and base of four anterior legs, yellow; wings hyaline, areolet minute oblique, petiolated; legs and the apical two-thirds of abdomen, rufous.

Male.—Black, the head and thorax with a slight silvery pubescence; a spot on each mandible, and the palpi, pale yellowish; antennæ as long as the body, black, the basal joint dull rufous. Thorax black, the tegulæ pale yellowish, metathorax with the elevated lines indistinct, the central area very elongate, not well defined. Wings hyaline, iridescent; nervures and stigma black; areolet minute, oblique, petiolated. Legs pale rufous, the anterior coxæ and all the trochanters, yellowish, the posterior tarsi obfuscated, pale at base. Abdomen obscure rufous, the first segment except extreme tip, basal half of the second, and extreme base of the third, black; middle of the apical segments obfuscated; apex broad, compressed, appendages blackish. Length $2\frac{3}{4}$ lines; expanse of wings $4\frac{1}{4}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

Very closely allied to *M. Oxytus*, but differs by the minute oblique areolet of the wings, by the anterior coxæ and all the trochanters being yellow, and by the apical segments of the abdomen being broadly compressed and entirely rufous.

13. *Mesoleptus flavirictus*, n. sp.

Black; face silvery; mandibles, palpi, basal joint of antennæ beneath, tegulæ and the legs at base, yellow; rest of legs and the abdomen except base and apex, rufous; wings hyaline, areolet small, oblique.

Female.—Black, thinly clothed with silvery pubescence, more obvi-

ous on the face; mandibles except tips, and the palpi, pale yellow; antennæ two-thirds the length of the body, blackish at base, dull rufous towards the tip, basal joint beneath yellow; tegulæ pale yellowish; elevated lines on metathorax not well defined, the central area rather large, elongate. Wings hyaline, iridescent; nervures and stigma pale fuscous, the former yellowish at base; areolet small, subtriangular, oblique, petiolated. Legs pale rufous, the four anterior coxæ, all the trochanters, extreme base of the tibiæ and most of the tarsi, yellowish; posterior tibiæ and tarsi obfuscated at tips. Abdomen elongate, subcompressed, broad at tip, rufous; the first, most of the 2nd, extreme base of the 3rd and the two or three apical segments, black; beneath tinged with yellowish; ovipositor subexserted. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—Pennsylvania. E. T. Cresson.

Closely allied to *M. Oxytus* and *M. affinis*, but is larger and easily distinguished by the basal joint of the antennæ being yellow beneath.

14. *Mesoleptus subrubidus*, n. sp.

Black; spot on mandibles, palpi, tegulæ and trochanters, pale yellowish; wings hyaline, areolet triangular, petiolated; legs and abdomen except base, rufous.

Male.—Black, clothed with a thin, pale, glittering pubescence; spot on each mandible and the palpi, pale yellowish; antennæ porrect, as long as the body, entirely black; tegulæ pale yellowish; metathorax with the elevated lines tolerably distinct, the central area large, subquadrate. Wings very faintly tinged with fuscous, iridescent; nervures and stigma fuscous, the former yellowish at base; areolet small, triangular, petiolated. Legs rufous; the four anterior coxæ and all the trochanters beneath, pale yellowish: posterior coxæ, except tips, black. Abdomen long, slender at base and gradually thickened towards the tip which is subcylindric, shining, rufous, the first, second except tip and the extreme base of the third segments, black; apex sometimes slightly obfuscated. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—New Jersey (Cresson); Illinois (Dr. Lewis).

Resembles *M. Oxytus* in coloring, but is much larger, more elongate and slenderer.

15. *Mesoleptus? dimidiatus*, n. sp.

Black; mouth and tegulæ yellowish; legs and middle of abdomen pale rufous; venter yellowish; wings hyaline, areolet minute, oblique, petiolated; ovipositor long.

Female.—Black, shining, slightly pubescent; most of mandibles and the palpi, yellowish; antennæ two-thirds the length of the body, black, the basal joint beneath dull yellow; tegulæ pale-yellowish; metathorax slightly sulcate behind and somewhat transversely aciculate, the elevated lines well defined, the central area rather large, pentangular, the lower portion open. Wings hyaline, slightly iridescent, nervures and stigma blackish, pale at base; areolet minute, oblique and petiolated. Legs pale rufous, the tarsi paler, obfuscated at tip, the posterior coxæ black. Abdomen robust, subfusiform, slender at base, broad and subcompressed at the apex; first segment dilated at tip, the peduncle slender; apex of the 1st, the whole of the 2nd and the base of the 3rd segments, pale rufous; remaining segments black; ventral segments yellowish; ovipositor as long as the abdomen, rufo-piceous. Length $3\frac{1}{4}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

This may not belong to *Mesoleptus* on account of its long ovipositor; otherwise it has the characters of that genus.

16. *Mesoleptus decoloratus*, n. sp.

Black; face, legs and middle of abdomen obscure yellowish-red; wings hyaline, areolet triangular; abdomen clavate.

Male.—Black, slightly pubescent; face beneath the antennæ, clypeus and mouth, obscure testaceous; antennæ very slender, longer than the body, rufo-fuscous, pale at base; tegulæ and a minute spot before the wings, pale yellowish; metathorax with the elevated lines tolerably distinct, the central area elongate. Wings ample, hyaline, iridescent; nervures and stigma fuscous, pale yellowish at base; areolet triangular. Legs pale rufous, the tarsi paler. Abdomen slightly petiolated, clavate, dull yellowish-red, the basal segment, except tip, and the two or three apical segments black, the second segment sometimes obfuscated on its basal half. Length $3\frac{3}{4}$ lines; expanse of wings 6 lines.

Hab.—Illinois. Dr. Samuel Lewis.

Resembles *M? dimidiatus* much in coloration, but the antennæ and wings are half again as long, and the abdomen differently shaped.

17. *Mesoleptus distinctus*, n. sp.

Black; spot on mandibles, palpi, inner side of antennæ at base and tegulæ, yellow; wings hyaline, iridescent, areolet triangular, petiolated; legs and most of abdomen, pale rufous.

Female.—Black; spot on mandibles and the palpi, pale yellowish; eyes large, prominent, approximate beneath the antennæ; antennæ porrect, nearly as long as the body, black, the 3rd to 6th or 8th joints yellowish on the inside. Thorax thinly clothed with a short, fine, pale, glittering pubescence; tegulæ pale yellowish; metathorax with the elevated lines well defined. Wings very faintly tinged with fuscous, beautifully iridescent; nervures and stigma fuscous; areolet small, triangular, petiolated. Legs pale rufous, all the trochanters beneath pale yellowish, the posterior tibiæ slightly obfuscated, the posterior coxæ mostly black. Abdomen rather slender, broad and subcompressed at tip, rufous, the first, second except tip and the base of the third segments, black, the fifth and sixth segments sometimes obfuscated; ovipositor exerted about one line. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

Hab.—New Jersey. E. T. Cresson.

Easily distinguished from all other species known to me, by the basal joints of the antennæ being yellowish on the inside.

18. *Mesoleptus porrectus*, n. sp.

Black; most of mandibles, palpi and tegulæ, yellowish; legs and abdomen, pale rufous; wings hyaline, areolet minute, oblique, petiolated; ovipositor nearly as long as the abdomen.

Female.—Black; most of the mandibles and the palpi, yellowish; antennæ three-fourths the length of the body, black above, somewhat piceous beneath; tegulæ yellowish; metathorax with the elevated lines tolerably distinct, the central area narrow and very elongate. Wings hyaline, iridescent; nervures and stigma fuscous, the former yellowish at base; areolet minute, oblique, petiolated. Legs, including the coxæ, entirely yellowish-rufous. Abdomen slender at base, very broad and much compressed at tip, which is abruptly truncate, the ovipositor, which is more than half the length of the abdomen, is porrect; extreme base of the first segment and the middle of the three apical segments, blackish, the remainder yellowish-rufous. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

19. *Mesoleptus subtenuis*, n. sp.

Black: most of mandibles, palpi, basal joint of antennæ beneath, tegulæ, legs, and middle of abdomen, yellow or reddish-yellow; wings hyaline, areolet minute, oblique, petiolated.

Male.—Slender, black; most of the mandibles and the palpi, yellowish; antennæ as long or a little longer than the body, black, the basal joint beneath with a yellow spot; tegulæ yellowish; the elevated lines on the metathorax rather indistinct. Wings very faintly tinged with fuscous, iridescent; nervures and stigma fuscous, the former yellowish at base; areolet minute, oblique, petiolated. Legs, including the coxæ, entirely reddish-yellow; the posterior tibiæ and tarsi sometimes slightly obfuscated. Abdomen elongate, rather slender, rather broad and sub-compressed at tip, black; apex of the first, whole of the second and the basal half of the third and fourth segments, reddish-yellow. Length $2\frac{3}{4}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

20. *Mesoleptus nigripes*, n. sp.

Black; spot on mandibles yellowish; wings subhyaline, areolet small, triangular, petiolated; apical half of the fourth and all the following segments dull rufous.

Female.—Black, rather short, clothed with a thin whitish pubescence; each mandible with an obscure yellowish spot; antennæ rather more than half the length of the body, entirely black; metathorax with the elevated lines well defined, the central area pentangular, moderate. Wings slightly stained with fuliginous; nervures and stigma black; areolet small, triangular, petiolated. Legs black, the anterior pair rufo-piceous in front. Abdomen rather stout, the first segment and basal half of the second, black, the remainder rufous; apex broadly compressed; beneath stained with yellowish; ovipositor rufous, exerted about one line. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

21. *Mesoleptus hostilis*, n. sp.

Black; mandibles mostly yellowish; most of abdomen and legs obscure rufous; wings hyaline, areolet minute, subtriangular, petiolated.

Male.—Black, rather slender, clothed with a thin whitish pubescence; each mandible with a large yellowish spot; antennæ as long as the body, entirely black; metathorax with the elevated lines indistinct, the central area moderate, elongate. Wings hyaline, with a faint tinge of fuli-

ginous, iridescent; nervures and stigma black; areolet subtriangular, minute, petiolated. Legs rufo-piceous, the anterior pair paler; coxæ, trochanters and most of the four posterior femora, black; posterior tarsi blackish. Abdomen long, slender, subcylindric, shining, dull rufous, except the basal segment; apex not compressed; sometimes the two apical segments are obfuscated. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—Illinois. Dr. Samuel Lewis.

This may be the male of *M. nigripes*.

22. *Mesoleptus vicinus*, n. sp.

Black; mandibles, palpi and tegulæ, pale yellowish; legs and abdomen except base, rufous; wings hyaline, areolet triangular, petiolated.

Female.—Black, thinly clothed with a pale glittering pubescence; most of mandibles and the palpi, yellowish; antennæ three-fourths the length of the body, black; tegulæ yellowish; metathorax with the elevated lines well defined, the central area subquadrate. Wings almost hyaline, iridescent; nervures and stigma testaceous, the former much paler at base; areolet small, subtriangular, petiolated. Legs rufous, the trochanters yellowish, the posterior coxæ piceous. Abdomen elongate, slender at base, gradually thickened and subcompressed towards the apex; rufous, the first and second segments except their tips, black; beneath, slightly tinged with yellowish; ovipositor rufous, exerted about one line. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—New Jersey. E. T. Cresson.

Resembles *M. hostilis*, but is more robust, and the legs are almost entirely rufous.

23. *Mesoleptus vultus*, n. sp.

Black; face, palpi, basal joint of antennæ beneath, tegulæ and four anterior coxæ and trochanters, pale yellowish; legs and apex of the four basal segments of the abdomen, pale rufous; wings hyaline, areolet 5-angular.

Male.—Black, shining; face, clypeus, mandibles and palpi, pale yellowish; antennæ porrect, about as long as the body, piceous, the basal joint beneath, pale yellowish, the apical joints beneath tinged with rufous. Thorax polished; tegulæ and a spot before the fore-wings, pale yellowish; the elevated lines on the metathorax tolerably well defined, the central area moderate, subrotundate. Wings hyaline, iridescent; nervures and stigma fuscous, the former pale at base; areolet 5-angular.

Legs yellowish-rufous, the four anterior coxæ and trochanters pale yellowish, the posterior tibiæ and tarsi obfuscated. Abdomen long and slender, black, shining at tip; apical margins of the 1st, 2nd and 4th segments and the apical half of the 3rd segment, pale rufous, that on the 4th segment obscure. Length 3 lines; expanse of wings 4 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

24. *Mesoleptus flavifrons*, n. sp.

Black; face, mouth, spot on each side of mesothorax, tegulæ and four anterior coxæ, yellow; legs and abdomen, except base, honey-yellow; wings large, hyaline, areolet subtriangular, oblique; subpetiolated; abdomen clavate.

Male.—Head black, shining; the face beneath the antennæ, clypeus, mandibles and palpi, yellow; antennæ very slender, longer than the body, brown-black, paler towards the tips, the two basal joints beneath yellowish. Thorax black, shining; a spot on each side of the mesothorax anteriorly, tegulæ, and small spot before and another beneath the fore-wings, yellow; scutellum convex, black; metathorax black, shining, almost smooth, without elevated lines, except a few longitudinal rugæ on the disk. Wings long and ample, hyaline, beautifully iridescent; nervures fuscous, pale testaceous at base, stigma black, with an obscure pale spot at base; areolet subtriangular, slightly oblique and subpetiolated, the 2nd recurrent nervure somewhat angular in the middle. Legs honey-yellow, the four anterior coxæ and all the trochanters, pale yellowish; tips of the posterior tibiæ black. Abdomen clavate, slender at base; 1st segment sublinear, slender, slightly dilated at tip, with a rather prominent tubercle on each side of the middle; the segments gradually dilated from the 2nd segment to the tip; basal segment black, its tip and all the remaining segments honey-yellow; beneath paler. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{2}$ lines.

Hab.—New Jersey. E. T. Cresson.

25. *Mesoleptus bicolor*, n. sp.

Black; mouth, antennæ, legs and abdomen dull honey-yellow; wings hyaline, areolet oblique, subpetiolated; abdomen slightly petiolated, subclavate.

Male.—Head black, anterior margin of the clypeus and most of mandibles rufo-testaceous; palpi whitish; antennæ very slender, longer than the body, dull honey-yellow. Thorax black; tegulæ whitish; scutellum and metathorax black, the elevated lines of the latter subobsolete. Wings ample, hyaline, iridescent; nervures fuscous, pale testa-

ceous at base; stigma rather large, fuscous, pale at base and tip; areolet small, oblique and subpetiolated. Legs slender, yellowish; the posterior pair honey-yellow; the anterior and middle coxæ yellowish-white; tips of tarsi blackish. Abdomen slightly petiolated, subelavate, dull honey-yellow, apex obfuscated; basal segment gradually dilated towards the tip, the sides somewhat carinated, without tubercles. Length 4 lines; expanse of wings 7 lines.

Hab.—Pennsylvania. Mr. C. A. Blake.

Same form as *M. longicornis*, but differs by the head and thorax being black.

SECTION 3.

26. *Mesoleptus longicornis*, n. sp.

Dull yellowish-red; head and pleura beneath, black; face and tarsi yellowish; wings hyaline, areolet triangular, oblique, subpetiolated; abdomen subpetiolated.

Male.—Head transverse, black; the face beneath the antennæ, clypeus, mandibles and palpi, yellow; antennæ slender, longer than the body, orange-yellow, slightly involute at tips which are blackish. Thorax dull rufous, the dorsal lines tolerably well impressed; pleura beneath and slightly on the sides, black; tegulæ yellowish, scutellum and metathorax dull yellowish-rufous, the extreme sides of the latter with a large black spot. Wings large, hyaline, somewhat iridescent; nervures fuscous, pale at base, stigma testaceous; areolet small, obliquely triangular, subpetiolated. Legs pale honey-yellow, the posterior femora obfuscated, their tibiæ at tip blackish; all the tarsi yellowish-white, the claws blackish. Abdomen elongate, subelavate, subpetiolated, entirely honey-yellow, slightly dusky at the apex; basal segment sublinear, slightly and gradually dilated towards the tip, without lateral tubercles; ventral segments stained with yellowish. Length 5 lines; expanse of wings 11 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

27. *Mesoleptus concolor*, n. sp.

Dull honey-yellow; wings hyaline, areolet subtriangular; abdomen clavate.

Female.—Entirely dull honey-yellow, slightly tinged with brownish, shining, clothed with a thin pale, subsericeous pubescence; antennæ very slender, rather longer than the body; tegulæ pale yellowish; metathorax polished, the elevated lines distinct, the central area elongate, with a large, quadrate area on each side. Wings ample, hyaline, glossy,

iridescent; nervures and stigma blackish, pale at base; areolet subtriangular, very slightly petiolated. Legs color of the body, tolerably slender. Abdomen, slender at base and gradually dilated towards the apex, polished; basal segment dilated at tip, the sides carinated without tubercles, and the disk slightly canaliculate; apical segments thickened and sometimes subcompressed. Length $3\frac{1}{2}$ —4 lines; expanse of wings 6—7 lines.

Hab.—New Jersey. E. T. Cresson.

28. *Mesoleptus unicolor*, n. sp.

Yellowish-testaceous; wings hyaline, areolet subtriangular, oblique; abdomen slightly petiolated, clavate.

Entirely dull yellowish-testaceous or pale honey-yellow, the face, tegulæ, pleura and tarsi much paler; antennæ very slender and longer than the body; mesothorax more or less obfuscated on the disk; metathorax with the elevated lines not well defined, the central area narrow and very elongate. Wings ample, hyaline, glossy and beautifully iridescent; nervures fuscous, pale at base, stigma large, fuscous, pale at base; areolet subtriangular, rather oblique, and slightly petiolated, the outer nervure rounded, the 2nd recurrent nervure straight. Legs rather slender, color of the body, the tarsi paler and blackish at tip. Abdomen clavate, slightly petiolated, slender at base and thickened towards the apex, polished; basal segment gradually dilated towards the tip, the sides carinated and without tubercles; apical segments rather broad, subcompressed, and somewhat obfuscated. Length 3 lines; expanse of wings 6 lines.

Hab.—Pennsylvania; Delaware. Dr. Thos. B. Wilson.

Smaller than *M. concolor* and somewhat paler in color, otherwise they are much alike.

29. *Mesoleptus discolor*, n. sp.

Pale testaceous; the vertex, antennæ, mesothorax, scutellum, metathorax, sides of pleura, and basal segment of abdomen, blackish; wings hyaline, areolet subtriangular, oblique.

Male.—Pale testaceous, shining; a large spot encircling the ocelli, and the occiput, blackish; antennæ very slender, longer than the body, blackish, pale testaceous at base. Thorax: mesothorax blackish, with two subobsolete, pale, longitudinal lines on the disk; tegulæ and pleura pale testaceous, the latter with a large blackish patch on each side; scu-

tellum dull testaceous; metathorax blackish on the disk, and pale on the sides. Wings ample, hyaline, glossy and iridescent; nervures fuscous, pale at base; stigma large, blackish, pale at base; areolet subtriangular, oblique, subpetiolated, 2nd recurrent nervure slightly bent. Legs slender, color of the body, the coxæ paler. Abdomen slightly petiolated, clavate, polished, pale testaceous, the first segment blackish, gradually dilated towards the apex, without lateral tubercles; apical segments faintly obfuscated. Length 3 lines; expanse of wings 6 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

This may possibly be a variety of *M. unicolor*, which it resembles much in size and form, but the coloration is quite different.

30. *Mesoleptus antennatus*. n. sp.

Pale ferruginous; head and antennæ black, the latter with a broad white annulus; palpi, four anterior coxæ and all the tarsi, pale: wings hyaline, areolet triangular, scarcely petiolated.

Male.—Pale ferruginous, shining; head black, pubescent, mouth rufo-piceous, palpi pale; antennæ as long as the body, black, the basal joint beneath pale ferruginous, beyond the middle a broad white annulus. Thorax: mesothorax varied with fuscous, the pleura tinged with yellowish; lines of the metathorax rather indistinct, the central area very elongate. Wings hyaline, beautifully iridescent; nervures and stigma dark fuscous, the former testaceous at base; areolet triangular, scarcely petiolated. Legs pale ferruginous, the four anterior coxæ and legs in front and the posterior tarsi except tips, pale; posterior tibiæ obfuscated. Abdomen long, slender, polished, the extreme base and apex more or less obfuscated. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

Readily distinguished by the broad whitish annulus on the antennæ and the general coloration.

Genus **TRYPHON**, Grav.

SECT. 1.—Scutellum and abdomen black.....	Sp. 1— 3
“ 2.—Scutellum pale; abdomen black, the margins of the segments pale.....	Sp. 4— 5
“ 3.—Scutellum pale; abdomen yellow and black.....	Sp. 6
“ 4.—Scutellum black: abdomen red, or red and black, or black and yellow.....	Sp. 7—16

SECTION 1.

1. *Tryphon pedalis*, n. sp.

Black, shining; legs pale fulvous, posterior tibiæ and tarsi black, annulated with white; wings hyaline, iridescent, areolet small, oblique, subpetiolated; abdomen sessile.

Male.—Black, shining, slightly pubescent; most of the mandibles and the palpi, whitish; antennæ as long as the body, piceous, the basal joint black. Thorax polished, the dorsal lines well impressed, deeply so in front; tegulæ whitish; metathorax with the elevated lines tolerably well defined, the central area moderate, subquadrate. Wings hyaline, iridescent; nervures and stigma blackish, pale at base; areolet small, oblique, subpetiolated. Legs pale fulvous, the posterior tibiæ black, with a broad white annulus in the middle; their tarsi also black, annulated with white. Abdomen black, shining, sessile; basal segment with two sharply defined longitudinal carinæ on the disk; apical segment somewhat pointed. Length $2\frac{3}{4}$ lines; expanse of wings 5 lines.

Hab.—Illinois. Dr. Samuel Lewis.

2. *Tryphon carinatus*, n. sp.

Black; face and legs yellow or yellowish-red; wings obscure hyaline, areolet wanting; legs short and thick, abdomen sessile, subclavate, basal segments carinated.

Male.—Black, rather shining, thickly clothed with pale pubescence; face, except a short elongate blackish mark just beneath the antennæ, clypeus, except a blackish spot on each lateral margin, tips of the mandibles and the palpi, yellowish; antennæ about as long as the body, black; tegulæ obscurely yellowish; scutellum flat, rather large, its sides carinated; metathorax with the elevated lines longitudinal and sharply defined, the central area narrow and extending the whole length of the metathorax. Wings obscure hyaline, iridescent; nervures and stigma black, the former pale at base; areolet wanting. Legs short and thick as in *Exochus*; pale rufous, the two anterior pairs more or less tinged with yellowish, the posterior coxæ mostly black, and their tarsi brownish. Abdomen sessile, subclavate; basal segment with four sharply defined longitudinal carinæ; the second segment longitudinally rugose, with a well defined carina down its middle; the three following segments rather densely and deeply punctured and clothed with pale, appressed pubescence, the punctures on the apical segments fine and indistinct. Length 3 lines; expanse of wings $4\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

This little species has much the general appearance of an *Exochus*, but the face is flat and not protuberant. The metathorax and base of the abdomen are acutely carinated and the legs are short and thick.

3. *Tryphon? limatus*, n. sp.

Black, polished; mouth yellowish; antennæ brownish; legs fulvous, hind tibiæ white, their tips and the tarsi black; wings hyaline, areolet oblique, petiolated; abdomen subpetiolated.

Male.—Black, highly polished; face rather densely punctured, somewhat protuberant just beneath the antennæ; clypeus very transverse, much depressed at base, and almost entirely yellowish, as well as the mandibles and palpi; antennæ nearly as long as the body, brownish, the extreme base black; tegulæ whitish; metathorax convex, smooth and polished, without elevated lines. Wings ample, hyaline and iridescent; nervures and stigma blackish, whitish at base; areolet oblique, subtriangular, petiolated. Legs slender, rather long, fulvous, the four anterior tibiæ and tarsi paler; tips of the posterior femora, and tibiæ, and their tarsi except base, black; rest of the posterior tibiæ and base of their tarsi, white. Abdomen elongate, subpetiolated, slightly compressed at tip; first segment contracted near the base and gradually dilated to the tip; second segment at base with a well impressed fovea on each side. Length 4 lines; expanse of wings 8 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

SECTION 2.

4. *Tryphon? submarginatus*, n. sp.

Black: most of the face, mouth, sides of mesothorax, scutellum and apical margins of abdominal segments, white; pleura and legs in part pale rufous, posterior tibiæ and tarsi black, the former with a broad white annulus: wings hyaline, iridescent, areolet wanting; abdomen subsessile.

Male.—Black; two ill-defined lines on the face beneath the antennæ spreading on each side of the clypeus and continued beneath the eyes, the clypeus, mandibles except tips and the palpi, whitish; antennæ slender, rather longer than the body, rufo-piceous, the basal joint beneath pale. Thorax: mesothorax and pectus black; tegulæ, a broad sutural line before the wings, extending to the dorsal lines where it is suddenly truncate, dilated and pointed before and behind, a line beneath the fore-wings and a subobsolete spot beneath the hind-wings, whitish; pleura, except a space beneath the fore-wings, rufous; scutellum rather

convex, whitish, the space on each side black; postscutellum black with a transverse whitish spot on the middle; metathorax rufous, stained with blackish on the disk, the elevated lines obsolete, the central area small, elongate and ill-defined. Wings long and ample, hyaline, iridescent; nervures and stigma black, pale at base; areolet wanting, the 2nd recurrent nervure somewhat angular in the middle. Legs slender, posterior pair long; pale rufous; the four anterior coxæ, the trochanters and most of the tarsi, whitish; posterior tibiæ whitish, its tip and extreme base, black, their tarsi entirely black. Abdomen subsessile, elongate-subovate, black, shining towards the tip; basal segment grooved down the middle; apical margins of all the segments narrowly whitish, rather indistinct on the first three segments; ventral segments white. Length $3\frac{1}{2}$ lines; expanse of wings 7 lines.

Hab.—Illinois. Dr. Samuel Lewis.

5. **Tryphon pleuralis.** n. sp.

Black; mouth and tegulæ, yellowish-white; pleura, scutellum and legs, rufous; wings hyaline, areolet small, oblique, subpetiolated; abdomen with the apical margins of the dorsal segments pale; abdomen subpetiolated.

Female.—Black, subopaque, clothed with a very short, whitish pile; clypeus, mandibles, a spot on the cheeks beneath, and the palpi, whitish; antennæ slender, rather longer than the body, piceous, tinged with yellowish towards the base beneath; mesothorax and pectus black, pleura and scutellum dull rufous, as well as a spot behind the scutellum; tegulæ pale yellowish-white; metathorax entirely black, the elevated lines obsolete, the central area elongate, moderate. Wings hyaline, beautifully iridescent; nervures and stigma blackish, pale at base; areolet small, obliquely subtriangular and subpetiolated; the transverse cubital nervure within the submarginal cell very much arcuated towards the costa, the 2nd recurrent nervure straight, or slightly oblique. Legs slender, pale rufous; the four anterior coxæ, trochanters and tarsi, whitish; the posterior tibiæ and tarsi and the tips of the other tarsi blackish, extreme base of the posterior tibiæ whitish. Abdomen subpetiolated or slightly subsessile; black, shining towards the apex; extreme apical margins of the segments whitish, obsolete or subobsolete on the three basal segments, and distinct on the apical ones, the lateral margins of which are rather broadly marked with white; first segment longer than the second, much narrowed toward the base, and again

slightly dilated before reaching the base, the lateral tubercles not prominent. situated a little before the middle, disk faintly canaliculate; beneath stained with whitish; ovipositor subexserted. Length 3 lines; expanse of wings 5 lines.

Hab.—New Jersey. E. T. Cresson.

SECTION 3.

6. *Tryphon? trifasciatus*, n. sp.

Black, polished; tegulæ, scutellum, postscutellum, part of metathorax, legs and three bands on abdomen, yellow; wings subhyaline, areolet wanting; legs short and thick; abdomen subpetiolated, clavate.

Male.—Black, polished, clothed with a rather thin pale pubescence; head entirely black, eyes prominent, face narrow, palpi pale; antennæ nearly as long as the body brownish above, yellowish beneath, the basal joint beneath yellow. Thorax: the pleura protuberant beneath the wings, with a deep cavity before and behind to receive the anterior and intermediate femora in repose; scutellum and postscutellum yellow; metathorax small, shining, pubescent, black with a large transverse yellowish spot across its middle, sometimes obsolete, immediately behind the postscutellum a well impressed point, and at the insertion of the abdomen several short elevated ridges. Wings subhyaline, faintly stained with fuscous; nervures and stigma fuscous, the former pale at base; areolet wanting; the 2nd recurrent nervure very much angular near its base. Legs short and thick as in *Erochus*; yellow, the posterior coxæ beneath and the apical half of their femora, black; sometimes the four anterior femora exteriorly, the tips of the posterior tibiæ and tips of all the tarsi, are blackish. Abdomen subpetiolated or slightly subsessile, clavate, polished, black, the apical half of the three basal segments yellow; basal segment somewhat canaliculate or carinated on the disk towards the base. Length 5 lines; expanse of wings 7½ lines.

Hab.—Pennsylvania. Mr. Chas. A. Blake.

SECTION 4.

7. *Tryphon americanus*, n. sp.

Black; face, palpi and four anterior legs, yellow; abdomen, except basal segment, rufous; wings hyaline, areolet triangular.

Male.—Head black, the face beneath the antennæ, clypeus, mandibles except tips, and the palpi, yellow; immediately beneath the antennæ a longitudinal, abbreviated, blackish line and on each lateral mar-

gin of the clypeus a blackish, well impressed puncture; antennæ two-thirds the length of the body, porrect, blackish, the base and apex yellowish, the basal joint beneath yellow. Thorax black, shining; tegulæ pale yellowish; metathorax shining, with four sharply defined longitudinal carinæ, the two middle ones approximate. Wings hyaline; nervures and stigma fuscous, pale at base; areolet small, triangular, slightly petiolated, the second recurrent nervure angular in the middle. Legs: the two anterior pairs, the posterior coxæ and trochanters, and the basal half of their tibiæ, and most of their tarsi beneath, yellow; the posterior femora rufous, their extreme tips, the apical half of their tibiæ and most of their tarsi above, black. Abdomen elongate, subsessile, rufous; basal segment except its apex, black, flattened, with two elevated lines, very slightly dilated at the apex; apical segment faintly tinged with yellowish. Length 5 lines; expanse of wings 8 lines.

Hab.—Delaware (Dr. Thos. B. Wilson); Canada West (Mr. B. Billings, Jr.)

8. *Tryphon affinis*, n. sp.

Black; mouth, legs and abdomen, rufous; wings hyaline, areolet subtriangular, petiolated; abdomen subsessile, subclavate.

Female.—Head black; clypeus, mandibles and palpi, dull yellowish; antennæ two-thirds the length of the body, blackish, yellowish at base and at tips. Thorax shining, black; tegulæ pale yellow; scutellum and metathorax black, the latter polished, with four very sharply defined longitudinal carinæ as in the preceding species. Wings obscure hyaline, faintly tinged with fuliginous at tips; nervures and stigma blackish, whitish at base; areolet minute, subtriangular, slightly oblique, petiolated; 2nd recurrent nervure angular in the middle. Legs pale rufous, the two anterior pairs and the posterior trochanters tinged with yellowish; posterior femora at tips, their tibiæ, except a broad, pale, ill-defined annulus near the base, and most of their tarsi, blackish. Abdomen subsessile, subclavate, shining, rufous, the first segment except tip, black, with two approximate, well-defined longitudinal carinæ on the middle towards the base; apical segments very slightly compressed. Length 4 lines; expanse of wings 6 lines.

Hab.—Pennsylvania and New Jersey. E. T. Cresson.

Closely allied to *T. americanus*, but is smaller, with the face entirely black.

9. *Tryphon seminiger*, n. sp.

Black; face silvery; mouth yellowish; legs and abdomen, except base, rufous; wings subhyaline, areolet oblique, petiolated; abdomen subsessile, subclavate.

Female.—Black, thinly clothed with very short whitish pubescence, more obvious and silvery on the face; clypeus, mandibles and palpi dull yellowish; antennæ two-thirds the length of the body, black above, brownish beneath; tegulæ dull yellowish; metathorax with the elevated lines irregular, tolerably well defined. Wings faintly tinged with fuliginous; nervures and stigma black, pale at base; areolet minute, oblique, petiolated; 2nd recurrent nervure angular in the middle. Legs obscure rufous, the four anterior tibiæ and tarsi tinged with yellowish; coxæ black; the posterior femora and tibiæ at tips and their tarsi, obfuscated. Abdomen subsessile, clavate, rufous; basal segment black, except the extreme tip, with two approximate carinæ on the middle towards the base. Length $3\frac{1}{2}$ —4 lines; expanse of wings 6 — $6\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

Closely resembles the two preceding species in form and color, but is at once distinguished by the sculpture of the metathorax, which in this species is irregular and not sharply defined, while in the other two there are four very sharply defined and regular longitudinal carinæ.

10. *Tryphon semirufus*, n. sp.

Black; tegulæ yellow; legs and abdomen rufous; wings hyaline, areolet wanting; abdomen subsessile, subovate.

Female.—Black; clypeus polished, with large deep punctures; spot on mandibles at base and the palpi, yellowish; antennæ two-thirds the length of the body, brown-black, the basal joint beneath rufous; tegulæ pale yellowish; metathorax with the elevated lines irregular and ill-defined, the central area small and elongate, subobsolete. Wings hyaline, iridescent; nervures and stigma blackish, pale at base; areolet wanting; 2nd recurrent nervure straight. Legs, with the coxæ, rufous; apical half of the posterior femora blackish, their tarsi obfuscated. Abdomen rather short, subovate, subsessile, somewhat flattened above, the apex slightly compressed and tinged with blackish. Length 3 lines; expanse of wings 5 lines.

Hab.—Illinois. Dr. Samuel Lewis.

11. Tryphon analis, n. sp.

Black; face yellow; legs and abdomen, except apex, rufous; wings hyaline, areolet triangular, petiolated; abdomen sessile, flattened.

Male.—Head black; face beneath antennæ, clypeus, mandibles and palpi, yellowish; lateral margins of the clypeus and extreme tips of mandibles, black; face somewhat elevated with a deep, subtriangular incisure towards the base of the antennæ; antennæ three-fourths as long as the body, brown above, the two basal joints black, beneath reddish-brown, the basal joints paler. Thorax smooth and polished; tegulæ yellow; metathorax shining, the elevated lines irregular and tolerably well defined, the central area moderate and subquadrate. Wings hyaline, iridescent; nervures and stigma fuscous, pale at base; areolet small, triangular, petiolated; 2nd recurrent nervure angular in the middle. Legs, with the coxæ, pale rufous, the trochanters yellowish, the tips of the posterior femora, tibiæ and tarsi somewhat obfuscated. Abdomen sessile and flattened as in *Bassus*, the dorsal surface of the three basal segments being somewhat uneven, the first segment with two carinæ near its base; the four basal segments pale rufous, the apical margin of the fourth and the remaining segments black, polished. Length $3\frac{1}{2}$ lines; expanse of wings 6 lines.

Hab.—Pennsylvania. E. T. Cresson.

This species has much the form of those of the genus *Bassus*.

12. Tryphon festivus, n. sp.

Black; mouth, antennæ and four anterior legs, yellowish; posterior legs and abdomen except base, rufous; wings long, hyaline, areolet oblique, petiolated; abdomen subsessile, subclavate.

Male.—Black, shining, clothed with a short, thin, whitish pubescence, which is most obvious and silvery on the face; clypeus, mandibles and palpi, yellowish; antennæ as long as the body, brownish above, yellowish beneath, the basal joint yellow beneath; tegulæ pale yellow; metathorax punctured, the elevated lines obsolete. Wings long, hyaline, iridescent; nervures and stigma blackish, pale at base; areolet small, oblique and petiolated; 2nd recurrent nervure with a rudimental nervure on its exterior middle. Legs: the two anterior pairs yellowish, slightly tinged with rufous; the posterior pair dull rufous, somewhat obfuscated; their coxæ black, with the tips beneath and the trochanters, yellowish. Abdomen subsessile, or slightly subpetiolated, subclavate; basal segment carinated on its disk, with slight

indications of a tubercle on each side of the basal third, its color is black, except the tip which is rufous as well as all the remaining segments. Length $3\frac{1}{2}$ lines; expanse of wings $6\frac{1}{4}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

13. **Tryphon tibialis**, n. sp.

Black; mouth, base of antennæ beneath, tegulæ and most of legs, yellowish; middle of abdomen pale rufous, wings hyaline, iridescent, areolet minute, oblique, petiolated; hind tibiæ and tarsi annulated with black and white; abdomen subpetiolated, clavate.

Male.—Black, polished, slightly pubescent; face clothed with silvery pubescence, the clypeus, mandibles except tips, and the palpi, yellowish; antennæ rather longer than the body, rather slender, brown-black, the two basal joints beneath yellow. Thorax polished, tegulæ yellowish; metathorax with the elevated lines not well defined, the central area moderate, quadrate. Wings hyaline, beautifully iridescent; nervures and stigma dark fuscous, pale at base; areolet minute, oblique and petiolated; 2nd recurrent nervure slightly bent inwards near the base. Legs pale fulvous, the four anterior coxæ, their tibiæ and tarsi and all the trochanters, pale yellowish; posterior tibiæ black with a broad whitish annulus on the middle, their tarsi black, the joints whitish at base. Abdomen subpetiolated, subclavate, polished, black, the apical third of the first, the second and third segments pale yellowish-rufous, on each side of the third segment a rounded blackish stain; basal segment slightly carinated on the disk, with a small, ill-defined tubercle on each side about the middle. Length $2\frac{3}{4}$ lines; expanse of wings $4\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

14. **Tryphon rufocinctus**, n. sp.

Black; most of legs and the 2nd and 3rd segments of abdomen, dull rufous; wings hyaline, iridescent, areolet wanting; abdomen nearly sessile.

Female.—Black, subopaque; head and antennæ entirely black, the latter two-thirds the length of the body; tegulæ pale yellowish; metathorax with the elevated lines subobsolete, the central area small and elongate. Wings hyaline, beautifully iridescent; nervures and stigma black, pale at base; areolet wanting. Legs dull rufous or brownish, all the coxæ and the posterior femora black. Abdomen almost sessile, black, the 2nd and 3rd segments rufous; apical segments shining. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

15. Tryphon minimus, n. sp.

Black; middle of face, clypeus, mouth, tegulæ, broad sutural line before the wings, spot on each side of pleura behind and the coxæ and trochanters, yellow; legs and 3rd abdominal segment, fulvous; wings hyaline, areolet wanting; abdomen subsessile.

Female.—Black, polished; a large quadrate spot on the middle of the face, clypeus, large spot on the mandibles, and the palpi, yellow; eyes prominent; antennæ as long as the body, brown-black, the basal joint beneath tipped with yellowish. Thorax: tegulæ, a broad sutural line before the wings, extending to the dorsal lines where it is suddenly truncate, dilated and pointed before and behind, an irregular line beneath the fore-wings, a spot beneath the hind-wings and an elongate spot on each side of the pleura behind just before the middle coxæ, all yellowish; metathorax punctured, without elevated lines. Wings hyaline, iridescent; nervures and stigma fuscous, pale at base; areolet wanting; 2nd recurrent nervure straight. Legs fulvous; the posterior tibiæ at tips and their tarsi obfuscated; all the coxæ and trochanters bright yellow. Abdomen subsessile or very nearly sessile, with a stout tubercle on each side of the first segment near the base; middle of the two basal segments somewhat concave; the apical margin of the 2nd and the whole of the 3rd segments above, fulvous; apical segments polished. Length $1\frac{3}{4}$ lines; expanse of wings $3\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

16. Tryphon capitatus, n. sp.

Black, polished: head, pectus, pleura, legs and 3rd abdominal segment, pale fulvous; wings hyaline, stigma large, areolet wanting; abdomen subsessile.

Male.—Head rather large; subquadrate, entirely pale fulvous, shining, face paler; eyes small, round and black; antennæ as long as the body, brown-black, the basal joint yellowish. Thorax polished; mesothorax black; tegulæ, collar, pectus and pleura pale fulvous; scutellum and metathorax black, the extreme sides of the latter pale fulvous. Wings ample, hyaline, beautifully iridescent; nervures fuscous, pale at base, stigma large, black; areolet wanting. Legs, with the coxæ, pale fulvous, the tips of the posterior tibiæ, brownish. Abdomen subsessile or slightly subpetiolated, subclavate, polished, black, the 3rd segment pale fulvous; basal segment with a prominent tubercle on each side of the middle. Length 2 lines; expanse of wings 4 lines.

Hab.—Pennsylvania. E. T. Cresson.

Genus **CTENISCUS**. Haliday.1. **Cteniscus mediatu**s. n. sp.

Black: face, orbits, tegulæ, a sutural line before the wings, coxæ and trochanters yellowish: rest of legs pale rufous: wings hyaline, iridescent, areolet oblique, petiolated: abdomen subsessile, with a yellowish spot at tip of each segment.

Male.—Black, polished; face, frontal orbits, cheeks beneath, clypeus, mandibles and palpi, pale yellow; antennæ as long as the body, black above, brown beneath, the basal joint beneath yellowish. Thorax: tegulæ, a broad sutural line before and a short line beneath the wings, and an oblique line on each side of the pectus, pale yellow; scutellum rather convex, black, its tip yellowish; metathorax with the elevated lines tolerably well defined, the central area elongate. Wings hyaline, beautifully iridescent; nervures and stigma fuscous, pale at base; areolet small, oblique and petiolated. Legs pale rufous, all the coxæ and trochanters pale yellow, the posterior tibiæ and tarsi obfuscated. Abdomen subsessile, polished, somewhat flattened, black, all the segments with an apical yellow spot on the disk above, the spots becoming more transverse towards the apex; the incisure between the 3rd and 4th segments tinged with fulvous; basal segment subopaque, slightly emarginate; base of 2nd segment somewhat depressed and uneven. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

2. **Cteniscus dorsalis**. n. sp.

Yellowish-brown; face, orbits, tegulæ, a line before the wings, four anterior coxæ and trochanters, and a spot on the disk of each abdominal segment, yellow; wings hyaline, iridescent, areolet oblique; abdomen sessile.

Male.—Yellowish-brown, polished; the face beneath the antennæ, frontal orbits, lower half of the cheeks, clypeus, mandibles and palpi, pale yellow; antennæ about as long as the body, rufo-piceous, the basal joint beneath tinged with yellowish. Thorax: tegulæ, a broad sutural line before, and a short one beneath the fore-wings, pale yellow; scutellum somewhat produced, with a large pale spot; metathorax convex, polished, the elevated lines subobsolete. Wings hyaline, iridescent; nervures and stigma fuscous, pale at base; areolet oblique, the 2nd recurrent nervure rounded outwardly, and received by the areolet at its tip. Legs color of the body, the four anterior coxæ and trochanters pale yellowish. Abdomen sessile, robust, only slightly narrowed at base,

yellowish-brown or obscurely honey-yellow, each segment having on its disk at tip a transverse yellowish spot, very small on the first segment and becoming larger towards the apex; first segment slightly broader at tip than at base, the lateral margins somewhat carinated and the tubercles scarcely defined; the second segment has on each side an oblique well-impressed line, diverging from the basal middle to the lateral margin. Length $2\frac{1}{2}$ —3 lines; expanse of wings 5—6 lines.

Hab.—Illinois. Dr. Samuel Lewis.

3. *Cteniscus orbitalis*, n. sp.

Fulvous; head large, white, vertex and occiput black; scutellum whitish; wings hyaline, areolet oblique, petiolated; abdomen subsessile, subelavate.

Male.—Head large, nearly quadrate, black, the face, frontal orbits, cheeks, clypeus, mandibles except tips, and the palpi pure white; antennæ nearly as long as the body, basal half blackish, apical half yellowish, basal joint robust and piceous beneath. Thorax fulvous, polished, posterior margin of the mesothorax in front of scutellum, blackish; tegulæ, a sutural line before the wings and another down each side of the pectus, whitish; scutellum and postscutellum whitish, the spaces on each side blackish; metathorax entirely fulvous, the elevated lines well defined, the central area moderate and elongate. Wings hyaline, iridescent; nervures and stigma fuscous, pale at base; areolet small, oblique and petiolated. Legs fulvous, the four anterior coxæ and trochanters whitish. Abdomen subsessile, subelavate, polished, entirely fulvous, slightly dusky towards the tip. Length 3 lines; expanse of wings 6 lines.

Hab.—Pennsylvania. E. T. Cresson.

Readily distinguished by the large black and white head, the rest of the body being fulvous.

4. *Cteniscus flavicoxæ*, n. sp.

Black; face, orbits, tegulæ and coxæ, yellow; legs and abdomen, except base, fulvous; wings hyaline; areolet oblique, petiolated; abdomen subsessile.

Female.—Head rather large, black, polished; face, except a dark stain on its middle, frontal orbits, narrowed on each side of antennæ, cheeks beneath, clypeus, mandibles and palpi, pale yellow; antennæ as long as the body, blackish, the apical third yellowish, the two basal joints beneath yellow. Thorax black, polished; the tegulæ, a short

sutural line before, and a minute line beneath the fore-wings, yellow; scutellum black, its tip yellowish; metathorax black, shining, the elevated lines well defined, the central area moderate, subrotundate. Wings hyaline, iridescent; nervures fuscous, pale at base, stigma large, black with a pale spot at base; areolet minute, oblique and petiolated. Legs fulvous, all the coxæ and trochanters pale yellow, the posterior tibiæ brownish. Abdomen subsessile, rather short, broad and subdepressed, polished; basal segment black, remaining segments fulvous, except the sides of the 2nd, 3rd and 4th segments which are blackish. Length $2\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

5. *Cteniscus clavatus*, n. sp.

Black; face, tegulæ, tip of scutellum, most of legs and the abdomen except base, yellowish; wings subhyaline, iridescent, areolet triangular, petiolated; abdomen clavate.

Male.—Shining, slightly pubescent; head black, face beneath the antennæ, clypeus, mandibles and palpi, yellow; antennæ longer than the body, black, honey-yellow towards the base, especially beneath. Thorax black; tegulæ pale yellow; scutellum convex, black, with a yellowish spot at tip and another on postscutellum; metathorax with the elevated lines well defined, the central area moderate, quadrate. Wings slightly stained with fuscous, iridescent; nervures and stigma testaceous, pale at base; areolet small, triangular, petiolated. Legs pale fulvous, coxæ black, the two anterior pairs beneath, all the trochanters and the anterior tibiæ and tarsi, yellowish; posterior tibiæ and tarsi blackish, the former with a broad pale annulus on the middle. Abdomen elongate, clavate, slender at base, polished; basal segment sublinear, carinated above and with a prominent tubercle on each side at base; 2nd segment depressed at base with a slight carina on the middle; remaining segments convex and gradually dilated, the tip obtusely pointed; the 1st and base of the 2nd segments blackish, remaining segments honey-yellow, with the apical margins of the 3rd, 4th and 5th segments yellow, margined in front with black. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

Genus **EXOCHUS**. Grav.

Section 1.—Areolet small.

1. **Exochus apicalis**, n. sp.

Black, shining; face, orbits and tegulæ, yellowish; legs and apex of abdomen rufous.

Male.—Black, shining, thinly clothed with a very short, appressed, pale pubescence; face, mouth and orbits, yellowish, tinged with pale rufous; antennæ about half the length of the body, rufo-piceous. Thorax flattened above, shining; tegulæ yellowish; metathorax abruptly truncate behind, its posterior face concave, on the disk above two not well-defined, approximate, longitudinal carinæ forming a narrow, elongate central area. Wings hyaline; nervures and stigma black, the former pale at base; areolet minute, oblique and petiolated. Legs rufous, the coxæ black. Abdomen sessile, shining, cylindrical, very slightly narrowed at base; the two apical segments rufous. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—Illinois. Dr. Samuel Lewis.

2. **Exochus fulvipes**, n. sp.

Black, polished; legs pale fulvous; wings hyaline, areolet oblique, *petiolated*.

Male.—Black, smooth and polished, slightly pubescent; palpi pale-yellowish; antennæ brown-black above, rufo-piceous beneath, tinged with yellow towards the base; tegulæ pale yellowish. Wings hyaline, slightly iridescent; nervures and stigma black, pale at base; areolet minute, oblique, and petiolated. Legs entirely pale fulvous. Abdomen subcylindric, slightly narrowed at base, the second and following segments equilateral. Length $2\frac{1}{2}$ —3 lines; expanse of wings 4—5 lines.

Female.—Resembles the male, but the abdomen is shorter and broader; the ovipositor is yellowish and slightly exerted.

Hab.—Pennsylvania. E. T. Cresson.

3. **Exochus pygmæus**, n. sp.

Black, polished; legs pale fulvous; wings hyaline, areolet triangular, *not petiolated*.

Male.—Differs from *E. fulvipes* only in the much smaller size, and in the areolet of the superior wings being triangular, much larger and not at all petiolated. Length 2 lines; expanse of wings $3\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

Section 2.—Areolet wanting.

4. *Exochus lævis*, n. sp.

Black, polished, legs reddish-brown; wings hyaline.

♂ ♀.—Black, smooth and polished, thinly clothed with a short, appressed, pale pubescence; palpi piceous; antennæ blackish, three-fourths the length of the body, thickened at base; tegulæ pale testaceous; metathorax polished, truncate behind, the elevated lines distinct, the central area elongate. Wings hyaline; nervures and stigma black. Abdomen highly polished, slightly narrowed at base, the first segment canaliculate, the remaining segments equilateral and subcylindric; ovipositor of the female rufous, scarcely exerted. Length $3\frac{1}{4}$ lines; expanse of wings 5 lines.

Hab.—California ♀ (Dr. Horn); Illinois ♂ (Dr. Lewis).

I see none but sexual differences between the specimen from California and those from Illinois.

5. *Exochus pleuralis*, n. sp.

Black; face, orbits, tegulæ, pectus, pleura, most of the legs and a triangular spot on each side of the 2nd, 3rd and 4th abdominal segments, yellowish; wings hyaline.

Male.—Black, polished, slightly pubescent; the face, mouth, and the frontal orbits very broad above and beneath the eyes, yellow; antennæ three-fourths the length of the body, brown-black above, rufopiceous beneath. Thorax: mesothorax black; tegulæ, pectus and pleura, yellowish, the latter slightly stained with pale rufous; scutellum black, pale at tip; metathorax black above, its extreme sides reddish-yellow, polished, the elevated lines tolerably well defined, the central area large and quadrate. Wings hyaline, the nervures and stigma blackish, the former pale at base. Legs pale yellowish, the posterior femora pale rufous, and the extreme tips of their tibiæ and tarsi blackish. Abdomen black, polished, subcylindric, slightly narrowed at base; the first segment with two longitudinal carinæ on the disk and one on each lateral margin; on each side of the 2nd, 3rd and 4th segments at tip a rather large, triangular, pale testaceous spot; beneath, stained with yellowish. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

6. *Exochus dorsalis*, n. sp.

Black: face, orbits, line before the wings, pleura and most of legs, yellowish; mesothorax rufous; wings hyaline.

Male.—Head black, the face, frontal orbits broad above and beneath

the eyes, and the mouth, pale yellowish; antennæ two-thirds the length of the body, black above, tinged with piceous beneath. Thorax: mesothorax flat, feebly punctured, polished, dull rufous, blackish in front; pectus stained with blackish; the tegulæ and a sutural line before the wings, pale yellowish-white; pleura pale fulvous; scutellum flat, polished, dull rufous margined with whitish; postscutellum black with a transverse white spot on its middle just beneath the scutellum; metathorax smooth and polished, black, its extreme sides pale fulvous, the elevated lines indistinct, the central area large, elongate-subquadrate. Wings hyaline, iridescent; nervures and stigma black. Legs pale fulvous, the anterior coxæ beneath, all the femora at tips, and most of the tibiæ and tarsi, white; posterior tibiæ black at base and apex, as well as the apex of all the tarsi. Abdomen cylindrical, scarcely narrowed at base, black, highly polished, its extreme apex with a somewhat obscure whitish spot. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—New Jersey. E. T. Cresson.

7. *Exochus pallipes*. n. sp.

Black; face, scutellum, pleura and legs, pale yellowish; wings hyaline.

Male.—Black, somewhat shining, thinly clothed with a fine, short, whitish pubescence; face and frontal orbits broad above and beneath the eyes, pale yellowish; antennæ two-thirds the length of the body, blackish above, rufo-piceous beneath. Thorax: mesothorax black; tegulæ, pectus and pleura, pale yellowish, the latter slightly stained with pale rufous; scutellum dull rufous, its tip pale yellowish, postscutellum with a yellowish transverse spot on its middle; metathorax black, its extreme sides yellowish-red, the elevated lines not well defined, the central area large, elongate, irregular. Wings hyaline; nervures and stigma black. Legs pale yellowish-white, the posterior femora slightly stained with pale fulvous; apex of their tibiæ and tips of the tarsi, blackish. Abdomen black, shining, slightly narrowed at base; beneath, stained with pale yellowish. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

Genus **TROGUS**, Grav.

Trogus flavipennis, n. sp.

Black; head, antennæ, legs, scutellum and base of abdomen, yellowish-ferruginous; rest of abdomen yellow; wings yellow, apical margins fuliginous.

Head yellowish-ferruginous, the frontal orbits tinged with yellowish;

on each side of the clypeus a black spot; antennæ two-thirds the length of the body. porrect, pale rufous, blackish toward the tips. Thorax black, densely and finely punctured; middle of mesothorax faintly sulcate and having on each side of this an abbreviated dull rufous stripe connecting with the sutural line which is also broadly dull rufous; tegulæ yellowish; a line beneath the front wings rufous; scutellum very much elevated, in the shape of a stout, subobtuse tubercle, bright rufous, yellowish behind and black laterally; postscutellum with a yellow spot; metathorax scabrous, black, clothed with short black pubescence; the elevated lines sharply defined. Wings yellowish, apical margins fuliginous, with a violaceous reflection; nervures fuscous, their base, as well as the stigma and costa, yellowish-ferruginous; areolet oblique, slightly petiolated. Legs yellowish-ferruginous; the coxæ and the posterior femora except extreme base and apex, black. Abdomen flattened above, with a slight carina down the middle; basal segment sharply bicarinated, yellowish-ferruginous, the petiole black; the second segment also yellowish-ferruginous; remaining segments yellow, paler towards the apex; the 3rd, 4th and 5th segments above with a subobsolete ferruginous dot on each side. Length 9 lines; expanse of wings 17 lines.

Hab.—Rocky Mountains, Colorado Territory.

Genus **HOPLISMENUS**, Grav.

Hoplismenus thoracicus. n. sp.

Pale rufous; head, mesothorax, most of hind legs and apex of abdomen, black; a broad annulus on antennæ and a spot on tip of abdomen, white; wings hyaline.

Male.—Head entirely black, palpi pale; antennæ very slender, rather longer than the body, black, the 3rd to 5th joints pale rufous, the 8th to 13th joints white, spotted beneath with blackish. Thorax pale rufous, very finely and closely punctured; mesothorax and pectus, black; scutellum gibbous, acutely carinated on each side, pale rufous, as well as the postscutellum; metathorax finely rugose, the elevated lines sharply defined, the central area moderate, transversely subquadrate, the posterior face obliquely depressed, the lateral tubercles not very prominent, obtuse; tegulæ piceous. Wings hyaline, faintly iridescent; nervures and stigma fuscous, pale at base; areolet small, subtriangular. Legs slender; with their coxæ, pale rufous, the four anterior trochanters,

femora and tibiæ more or less dusky; posterior femora, except base, their tibiæ, except a pale annulus near the base, and most of their tarsi, blackish. Abdomen scarcely as long as the head and thorax, subovate, depressed, rufous, apical half of the 3rd, and the remaining segments, black, the extreme apex with a transverse white spot; basal segment strongly arcuated, slightly dilated towards the tip, bicarinated above, and uneven at tip; 2nd segment somewhat rugose. Length 4 lines; expanse of wings $6\frac{1}{2}$ lines.

Hab.—Pennsylvania. Mr. Tryon Reakirt.

Closely allied to *H. dimidiatus* (Europe), but the antennæ are longer and the mesothorax is entirely black.

Genus **CRYPTUS**, Fabr.

SECTION 1.—Scutellum and abdomen black.....	Sp. 1—6
“ 2.—Scutellum pale; abdomen black.....	Sp. 7—8
“ 3.—Scutellum with pale markings; abdomen red or red and black.....	Sp. 9—10
“ 4.—Scutellum black; abdomen red or red and black.....	Sp. 11—24
“ 5.—Thorax, scutellum and abdomen yellowish-red.....	Sp. 25

SECTION 1.

1. *Cryptus robustus*, n. sp.

Black, shining, abdomen very robust; wings fuliginous, with a bluish gloss; legs rufous, posterior femora undulate, constricted at tip; metathorax with a transverse central area.

Female.—Very robust, deep black, shining; face broad, minutely punctured, with a subobsolete, obtuse, rounded tubercle beneath the antennæ, the front just behind the antennæ deeply excavated, the surface somewhat wrinkled; the orbits behind very narrowly and subobsoletely yellowish; clypeus polished, its lateral and apical margins much depressed, leaving the middle prominent; mandibles also polished, with a few punctures; palpi blackish, fulvous at base; antennæ nearly as long as the body, setaceous, slightly involute, black, the 3rd joint rather longer than the 4th and 5th together, the basal joint robust, tinged with rufous within. Thorax shining above, the dorsal lines deep, but not reaching the posterior margin; mesothorax feebly punctured, the pleura very densely punctured, somewhat aciculate, a spot beneath the posterior wings and the space between the anterior and middle coxæ, polished; scutellum convex, polished, deeply impressed in front; post-scutellum also polished; metathorax very densely punctured, opaque,

rather truncate behind, the lateral tubercles acute, from each of these tubercles a carina proceeds forward and forms a well-defined, transverse, semicircular central area on the disk. Wings ample, fuliginous, with a bluish gloss, the posterior pair clearer; nervures and stigma black; areolet rather large, subquadrate or 5-angular, the lower nervure broadly angular, the cubital nervure with a rudimental nerve within the first submarginal cell. Legs rufous, polished, the coxæ and trochanters black, the posterior tibiæ and tarsi reddish-brown; femora rather robust, the two posterior pair undulate beneath and somewhat suddenly constricted at tip. Abdomen very robust, ovate, shining black, faintly tinged with blue; basal segment much arcuated, short, polished, flattened above and broad at tip, which is sulcate on the middle and on each side; venter polished; ovipositor two-thirds as long as the abdomen, black. Length 6—7 lines; expanse of wings $11\frac{1}{2}$ —12 lines.

Hab.—Rocky Mountains, Colorado Territory.

2. *Cryptus proximus*. n. sp.

Black; wings fuliginous, with a bluish gloss; legs rufous, femora simple; metathorax with a large, triangular central area.

Female.—Differs from *C. robustus*, to which it is closely allied, as follows:—More elongate and much less robust; the 3rd joint of the antennæ not as long as the 4th and 5th together, the two latter being each two-thirds the length of the 3rd joint; the mesothorax more opaque and densely punctured; the central area of the metathorax is large and triangular; the legs rather longer, the femora slender, simple, not at all undulate beneath or constricted at tips, the 4th, 5th and 6th joints of the posterior tarsi are yellowish; the abdomen more elongate, much less robust, and the ovipositor as long as the body, rufo-piceous, with the valves black. Length 7 lines; expanse of wings 11 lines.

Hab.—Rocky Mountains, Colorado Territory.

3. *Cryptus luctuosus*. n. sp.

Black; frontal orbits whitish; femora rufous; wings smoky, hyaline with a bluish gloss; metathorax without a central area; ovipositor short.

Female.—Black, shining; frontal orbits beneath the antennæ whitish; clypeus polished, a slight prominence between it and the base of the antennæ, behind the latter the front is rather deeply excavated and aciculate; antennæ more than half the length of the body, rather slender, somewhat involute, black, brownish-sericeous towards the tip, basal

joint robust and polished, the 3rd and 4th joints about equal in length, the 5th a little shorter. Thorax above polished, minutely punctured, the dorsal lines very deep and large, beneath the wings very densely punctured, a polished spot beneath the posterior wings, as well as the space between the anterior and middle coxæ; scutellum polished; metathorax somewhat rugose, opaque, truncate behind, the carina bordering the truncation sharply defined, the lateral tubercles prominent and subacute. Wings uniformly tinged with fuliginous, and having a bluish gloss; nervures and stigma black; areolet 5-angular, the lower nervure broadly angular. Legs black, polished, all the femora, and the anterior tibiæ and tarsi, rufous. Abdomen short and robust, subovate, shining; the basal segment flattened, strongly arcuated, broad at tip, the peduncle short and polished; ovipositor rather longer than the first segment, rufous, valves black. Length 5 lines; expanse of wings $8\frac{1}{2}$ lines.

Hab.—Rocky Mountains, Colorado Territory.

Shorter and stouter than *C. proximus*, and without any central area on the metathorax.

4. *Cryptus nubilipennis*, n. sp.

Black; antennæ with a white annulus; wings with a fuliginous band across their apical third; legs mostly rufous; ovipositor longer than the body.

Female.—Black; face short and broad, finely punctured; the orbits behind subobsoletely rufous; the front not depressed behind the antennæ; clypeus small, transverse, polished, with a deep puncture on each side; mandibles small, polished, which, as well as the clypeus, is tinged with piceous; antennæ more than half the length of the body, subporrect, rather slender, black, the 8th to 11th joints more or less white, basal joint robust, the 3rd and 4th joints subequal, the 5th and 6th shorter, subequal. Thorax densely and very finely punctured, shining, the dorsal lines not deep; scutellum slightly convex, densely punctured; metathorax finely scabrous, somewhat rounded behind, the elevated lines indistinctly defined, and forming a large, nearly obsolete, rhomboidal central area, the lateral tubercles small. Wings smoky-hyaline, the extreme tips and a broad band on the apical third, not quite reaching the posterior margin of the wing, fuliginous; nervures and stigma black; areolet 5-angular. Legs rather slender, rufous; the coxæ and trochanters black; the four anterior femora at base, apex of

the posterior tibiæ and all the tarsi, brownish. Abdomen rather short, robust, subovate; basal segment strongly arcuated, rather longer than the second, flattened, broad at tip and somewhat bilineated; ovipositor longer than the abdomen, rufous, valves black. Length $4\frac{1}{2}$ lines; expanse of wings 8 lines.

Hab.—Rocky Mountains, Colorado Territory.

Allied to *C. luctuosus* but is easily distinguished from that species by the band on the wings.

5. *Cryptus crassicornis*, n. sp.

Black: antennæ much thickened, opaque: frontal orbits white; legs rufous, the tarsi yellowish: wings subhyaline; abdomen slender.

Male.—Deep black, slightly pubescent; face rather long, eyes prominent; the orbits, more or less interrupted on each side near the vertex and beneath the eyes, sometimes ending in a spot on each side of the clypeus, narrowly whitish; clypeus small, prominent, polished; mandibles projecting; basal joint of palpi yellowish; the front behind the antennæ deeply excavated; antennæ nearly as long as the body, opaque black, much thickened at base, and gradually attenuated towards the tip, which is very slender, basal joint robust, subglobular, clothed with black pubescence, 3rd joint about $\frac{1}{4}$ th longer than the 4th, the 5th and 6th joints each as long as the 4th, remaining joints gradually diminish in length, the incisures indistinct. Thorax above shining, not densely punctured, the dorsal lines not deeply impressed, on the pleura the punctures are very dense; beneath the posterior wings a smooth, polished spot, as well as the surface between the anterior and middle coxæ; scutellum subconvex, shining, rather densely punctured; metathorax opaque, scabrous, pubescent, the elevated lines and lateral tubercles not well defined, in some specimens there is a faint indication of a subquadrate central area. Wings subhyaline, faintly tinged with fuliginous, and having a slight bluish gloss; nervures and stigma black; areolet 5-angular or somewhat 4-angular, the cubital nervure with a process within the first submarginal cell. Legs long and rather slender, rufous; four anterior tibiæ in front and the tarsi toward the tips more or less tinged with yellowish, the posterior tibiæ and tarsi sometimes brownish; all the coxæ and the trochanters, black. Abdomen elongate, slender, shining; the basal segment as long as the 2nd, polished, the apical third subquadrate, not much dilated, the lateral tubercles

prominent; the remaining segments sometimes faintly tinged with deep blue, and polished towards the apex. Length $6\frac{1}{2}$ — $7\frac{1}{2}$ lines; expanse of wings 10— $11\frac{1}{2}$ lines.

Hab.—Rocky Mountains, Colorado Territory.

Readily distinguished by the incrassate antennæ.

6. *Cryptus velox*, n. sp.

Black; antennæ with a narrow white annulus; legs rufous; wings hyaline, iridescent; ovipositor as long as the abdomen.

Female.—Black; face short and broad; clypeus slightly prominent, polished, with a slight puncture on its disk; mandibles piceous; front behind the antennæ slightly excavated; antennæ nearly as long as the body, slightly involute at tip, black, the 9th to 11th joints white, basal joint robust, piceous beneath, the 3rd, 4th and 5th joints long, subequal, the 6th shorter, about as long as the 7th joint. Thorax polished, finely punctured, the dorsal lines well impressed; scutellum slightly convex, smooth and polished, deeply impressed in front; metathorax shining, finely punctured, the elevated lines not distinct, but forming a small, subobsolete, triangular central area. Wings ample, hyaline, somewhat iridescent; nervures and stigma black, the latter with a pale spot at base; areolet 5-angular or somewhat 4-angular, the lower nervure angular. Legs rather slender, pale rufous, the four anterior tarsi at tips, the apex of the posterior femora, their tibiæ and tarsi, blackish. Abdomen elongate, subovate; basal segment not longer than the second, broad, almost subsessile, flattened above; apical segments polished; ovipositor as long as the abdomen, rufous, valves black. Length 4 lines; expanse of wings $7\frac{1}{2}$ lines.

Hab.—New York. Mr. James Angus.

SECTION 2.

7. *Cryptus excelsus*, n. sp.

Black; antennæ tricolored—fulvous, yellow and black; face, tegulæ, scutellum, posterior face of metathorax, and most of the legs, yellow; basal half of posterior femora, fulvous; wings subhyaline; basal segment of abdomen long and linear.

Female.—Black, shining, slightly pubescent; face, except on each side of the clypeus, frontal orbits not reaching the summit, a short line behind the eyes, the clypeus except its extreme apical margin, the labrum and the palpi, yellow; mandibles projecting, narrow, acute,

shining black, between them a tuft of yellowish pubescence; antennæ porrect, two-thirds the length of the body, somewhat thickened, basal joint black, yellow beneath, the 8 following joints fulvous, paler beneath, the 6 following joints yellow, the apical ones black above, fulvous beneath, the 2nd, 3rd and 4th basal joints are blackish above, the 3rd joint nearly as long as the 4th and 5th together. Thorax finely punctured, the dorsal lines deeply impressed; collar above, a line or two spots in front of the mesothorax, tegulae and a spot behind the posterior wings, yellow; scutellum rather convex, polished, yellow, as well as a line on the postsutellum; metathorax densely punctured, black, with a large subtrefoil, or sometimes an angular, yellow mark on its posterior face, as well as a spot on each side of it, anteriorly there is a curved well-defined carina extending from side to side. Wings subhyaline, stained with fuscous, and having a slight violaceous reflection at tips; nervures fuscous, pale at base, stigma brown; areolet large, slightly oblique, subquadrate or 5-angular, its lower nervure angular. Legs polished, long and slender, especially the posterior pair; the two anterior pairs except their coxæ above, the basal two-thirds of the posterior tibiae, sometimes a spot on their coxæ behind at base, and their tarsi entirely, yellow; the apical half of the posterior trochanters and the basal half of their femora, bright fulvous; remainder black. Abdomen elongate, fusiform, shining, black; basal segment much longer than the second, linear, not at all dilated, somewhat flattened above, scarcely arcuated, polished and having on each side beyond the middle a prominent tubercle, the apex slightly swollen and often with a yellowish spot on each side, sometimes the lateral margins and under surface of this segment including the petiole, are yellowish; ovipositor nearly as long as the abdomen, rufous or piceous, valves black. Length 6—7 lines; expanse of wings 9—10½ lines.

Variety ♀.—The face black, the frontal orbits, two connected spots beneath the antennæ, a semicircular spot on the clypeus and the labrum, yellow; base of the scutellum black; metathorax entirely black except a subarcuated yellow line posteriorly; abdomen entirely black except the first segment beneath which is tinged with rufous; posterior coxæ immaculate. Length 4½ lines; expanse of wings 7 lines.

Male.—Resembles the female, but much more slender, the antennæ

are fuscous above with a broad yellowish annulus, the basal half of the scutellum is black, and the postscutellum, metathorax and abdomen are immaculate, the latter very slender. Length 6 lines.

Hab.—Rocky Mountains, Colorado Territory.

8. *Cryptus junceus*, n. sp.

Black; spots on the face, most of antennæ, scutellum, posterior face of metathorax and the legs, except coxæ and posterior femora, yellow; abdomen very slender, basal segment long and linear.

Female.—Black, shining; frontal orbits, a line on the orbits behind, two spots just beneath the antennæ, most of the clypeus and labrum, and the palpi, yellow; antennæ porrect, nearly as long as the body, yellowish, blackish at base and apex especially above, basal joint black, yellow beneath, the 3rd joint about two-thirds the length of the 4th and 5th together, the incisures indistinct. Thorax densely and finely punctured, the dorsal lines well impressed; collar above, two spots in front of mesothorax, and tegulæ, yellow; scutellum convex, polished, yellow, as well as a narrow line on each side extending to the base of the posterior wings and a spot on the postscutellum; metathorax as in the preceding species, except that the large yellow mark on its posterior face is subtriangular. Wings hyaline, slightly iridescent, the apical margins slightly fuliginous; nervures fuscous, pale at base, stigma brown; areolet large, subquadrate, its lower nervure angular. Legs long and slender, especially the posterior pair, polished, yellow; the coxæ, except a spot at the base of the posterior pair behind, the posterior trochanters and their femora, black. Abdomen elongate, very slender, slightly fusiform; basal segment polished, half again as long as the second segment, cylindric, slightly arcuated, not at all dilated at tip, the lateral tubercles not visible; ovipositor about half the length of the abdomen, rufo-piceous, valves black. Length 6 lines; expanse of wings $9\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

Closely allied to *C. excelsus*, but is much more slender, the basal segment of the abdomen longer, more cylindric, not depressed above and without lateral tubercles, the legs and antennæ are differently colored and the wings clearer.

SECTION 3.

9. *Cryptus iridescens*, n. sp.

Black; spot on mandibles, palpi, tegulæ, scutellum, four anterior coxæ and trochanters, yellowish-white; legs and abdomen, except tip, pale rufous; the three apical segments black, the 7th with a whitish spot; wings hyaline, beautifully iridescent.

Male.—Black, slightly pubescent; spot on each mandible, and the palpi, yellowish-white; face flat, clypeus shining; antennæ slender, nearly as long as the body, black, the basal joint beneath ferruginous, the joints indistinct. Thorax shining; dorsal lines of the mesothorax tolerably well impressed; pleura finely striated; a line over the collar, tegulæ, a small spot before and another beneath the fore-wing, a large spot on scutellum and the postscutellum, yellowish-white; scutellum polished, the excavation in front longitudinally striated; metathorax finely reticulated, near the base a transverse carina arcuated on the disk, and behind the middle on each side a small, semicircular, transverse carina, in the place of tubercles. Wings hyaline, beautifully iridescent; nervures and stigma pale fuscous; areolet rather large, 5-angular or subquadrate. Legs pale rufous, the four anterior coxæ and trochanters yellowish, as well as the base of the posterior tibiæ and the 2nd, 3rd and 4th joints of their tarsi; base of the posterior trochanters, tips of their femora, rest of their tibiæ and tarsi, blackish or dusky. Abdomen elongate, subclavate, pale rufous, shining; basal segment slightly arcuated, polished, with a small tubercle on each side of the apical third; the three apical segments black, the 7th segment with a rounded white spot above; sometimes the base of the 2nd and apical margin of the 5th segments are blackish. Length $3\frac{1}{4}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

10. *Cryptus soror*, n. sp.

Black; most of clypeus and mandibles, palpi, tegulæ, spot on scutellum and 4 anterior trochanters, whitish; wings hyaline, iridescent. Legs and abdomen rufous; basal half of the 2nd, base of the 3rd and 5th, and the apical segments, except a small obscure whitish spot on the 7th, black.

Male.—Black, slightly pubescent, sculptured as in the preceding species; most of the clypeus and mandibles, and the palpi, whitish; antennæ as long as the body, slender, black, basal joint beneath rufous, the joints indistinctly defined; tegulæ, a minute dot beneath the fore-wing, a spot on scutellum and the postscutellum, whitish. Wings hya-

line, iridescent; nervures and stigma pale fuscous, yellowish at base; areolet large, subquadrate. Legs pale rufous, the four anterior trochanters, pale yellowish, their coxæ somewhat tinged with yellowish; tips of posterior femora black, their tibiæ, except base which is pale, and their tarsi, dusky. Abdomen elongate, slender, subclavate, pale rufous, shining; basal segment slightly arcuated, polished, with a tubercle on each side of the apical third; basal half of 2nd, basal margins of the 3rd and 5th, and the three apical segments, except an obscure whitish spot on the 7th segment above, black. Length 3 lines; expanse of wings 5 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

Closely allied to *C. iridescens*, but the antennæ are longer, the areolet of the wings larger, and the abdomen and legs differently colored.

SECTION 4.

11. *Cryptus americanus*. n. sp.

Black; abdomen rufous; wings subhyaline; ovipositor as long as the body.

Female.—Black; apical margin of the clypeus and the frontal orbits, obsoletely whitish; face minutely punctured, much depressed just behind the insertion of the antennæ, and finely and transversely aciculate; between the clypeus and the antennæ there is a small rounded obtuse tubercle; palpi pale fuscous; antennæ nearly as long as the body, very slender, curved at the apex, piceous, the basal joint robust, black, the 3rd and 4th joints nearly equal in length, the 3rd longest, the 5th joint shorter than the 4th, 6th about half the length of the 5th. Thorax very densely and finely punctured; mesothorax with two deeply impressed longitudinal lines, approximate posteriorly; scutellum convex, smooth and polished; metathorax rugose, slightly pubescent, abruptly truncate behind, the lateral angles prominent, acute or subacute. Wings subhyaline, more or less tinged with fuscous; nervures and stigma black; areolet 5-angular or somewhat triangular. Legs black, shining; the four anterior tibiæ and tarsi rufo-piceous, the posterior pair piceous. Abdomen oblong-ovate, bright rufous, shining; the basal segment arcuated, broad at tip, smooth and polished, with a shallow longitudinal groove on each side; ovipositor as long as the abdomen, rufo-piceous, valves black. Length 3–6 lines; expanse of wings 5–10 lines.

Hab.—Delaware (Dr. Wilson); Illinois (Dr. Lewis).

This species varies much in size.

12. *Cryptus persimilis*. n. sp.

Black; legs and abdomen rufous; wings fusco-hyaline; ovipositor nearly as long as the body.

Female.—Black, shining; frontal orbits pale; face minutely punctured, much depressed just behind the insertion of the antennæ; between the clypeus and base of antennæ a rounded obtuse tubercle; clypeus rather prominent, convex, rounded and somewhat depressed in front; palpi piceous; antennæ more than half the length of the body, very slender, slightly curved at tip, black, the 3rd to 6th joints as in *americanus*. Thorax polished, feebly punctured; the mesothorax with two deeply impressed longitudinal lines approximating posteriorly; tegulae rufo-piceous; scutellum polished; metathorax densely punctured, truncate behind, the elevated lines indistinct. Wings fusco-hyaline, with a brassy gloss; nervures fuscous, stigma ferruginous; areolet 5-angular. Legs rufous, the coxæ and trochanters black; tips of posterior tibiae and their tarsi somewhat obfuscated. Abdomen oblong-ovate, shining, basal segment much arcuated, polished, sides slightly grooved, broad at tip, most of the petiole blackish; ovipositor nearly as long as the abdomen, rufous, valves black. Length 4 lines; expanse of wings 7 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

Closely allied to *C. americanus*, but is at once distinguished by its red legs and darker wings.

13. *Cryptus limatus*. n. sp.

Black; antennæ with a more or less distinct whitish annulus; abdomen rufous, polished; ovipositor very short.

Female.—Black, shining; face densely and minutely punctured, coarser on the clypeus, the anterior margin of which is rounded and somewhat reflexed; mandibles tinged with rufous, pubescent; cheeks and occiput polished; antennæ as long as the body, rather slender, black, brownish beneath especially towards the apex, the 10th to 12th joints above, white, the 3rd, 4th, 5th and 6th joints subequal, the 6th rather the shortest. Thorax very densely and finely punctured, shining, the mesothorax with a shallow depressed line on each side; scutellum convex, finely punctured; metathorax short, truncate behind, somewhat longitudinally rugose, near the base a transverse acute carina extending all the way across, behind this another acute carina slightly oblique and interrupted in the middle and terminating on each side in

a short subacute tubercle. Wings subhyaline, more or less tinged with fuscous; nervures and stigma black; areolet 5-angular or somewhat 4-angular, the anterior and lateral nervures equal, the posterior nervure angular. Legs black, the anterior tibiæ and all the tarsi more or less tinged with pale rufous. Abdomen ovate, robust, bright rufous, highly polished; basal segment somewhat flattened, the apical third rather suddenly quadrate, the lateral angles prominent, extreme base of the petiole blackish; ovipositor very short, scarcely as long as the second segment. Length $4\frac{1}{2}$ —5 lines; expanse of wings 7—8 lines.

Hab.—Delaware and Virginia. Dr. Thos. B. Wilson.

Resembles *C. americanus*, but is more robust, the abdomen is highly polished, the areolet of the wings is quadrate, and the ovipositor is scarcely one-fourth as long as in that species.

14. *Cryptus similis*. n. sp.

Black: antennæ above with a white annulus; abdomen and most of the legs, rufous; posterior tarsi with a broad white annulus; wings almost hyaline.

Female.—Black, shining, clothed with a short pale pubescence, more obvious in certain lights; face densely punctured, the clypeus rounded in front, the margin somewhat reflexed and polished; palpi pale; antennæ as long as the body, black, sometimes tinged with rufous beneath, the 8th to 12th joints white above, the 3rd to 6th joints proportioned as in *limatus*, but longer and slenderer. Thorax shining, densely punctured; tegulæ whitish; metathorax sculptured as in *limatus*. Wings almost hyaline, very faintly tinged with fuliginous; nervures and stigma black; areolet quadrangular, as in *limatus*. Legs rufous, the four anterior pair paler in front; the coxæ, trochanters, tips of the posterior femora, and their tibiæ black; posterior tarsi black, the second, third and fourth joints white. Abdomen oblong-ovate, rufous, highly polished; basal segment much arcuated, elongate and slender, not much dilated at tip, the apical third subquadrate, the angles not prominent; ovipositor shorter than the abdomen. Length 4 lines; expanse of wings 7 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

Closely resembles *C. limatus*, but is smaller and distinguished at once by the color of the legs, which is mostly rufous, with the posterior tarsi mostly white; the basal segment of the abdomen is more linear and not so abruptly quadrate at the tip.

This and the three preceding species are remarkably similar in their general appearance, but may be readily distinguished by the following characters:—

C. americanus has the antennæ very slender, except the basal joint, and entirely black, the 6th joint about $\frac{1}{4}$ th the length of the 3rd; the face just beneath the antennæ has a small, obtuse, rounded tubercle; the clypeus is small and rather prominent; the mesothorax has two deeply impressed lines; the areolet of the wings is 5-angular or subtriangular; the legs are almost entirely black; the abdomen is shining, but not polished, and the ovipositor is about as long as the abdomen.

C. persimilis has all the characters of *americanus*, except that the legs are mostly rufous instead of black.

C. limatus is more robust; has the antennæ much stouter and annulated, the 6th joint nearly as long as the 3rd; the face broader, shorter and without the frontal tubercle; the clypeus is twice as large and not prominent, but broadly rounded in front; the mesothorax has no deeply impressed lines; the areolet of the wings is almost quadrate; the metathorax has two transverse carinæ; the legs are almost entirely black, but shorter; the abdomen is ovate, more robust, highly polished, the basal segment flattened and suddenly quadrate at tip, and the ovipositor is very short.

C. similis has all the characters of *limatus*, except that it is smaller, less robust, the antennæ rather longer, more slender and the joints longer, the legs mostly rufous, the posterior tarsi broadly annulated with white, the basal segment of the abdomen more linear and the ovipositor longer.

15. *Cryptus albitarsis*, n. sp.

Black, densely sculptured; most of legs and abdomen except tip, rufous; posterior tarsi white; wings subhyaline.

Male.—Robust, black, densely sculptured, slightly pubescent; head densely punctured, face flat, clypeus shining, palpi fuscous; antennæ about as long as the body, rather slender, black, 2nd joint beneath and extreme base of the 3rd, rufous, the joints rather indistinct, the 3rd longest, 4th shorter and subequal with the two or three following joints. Thorax finely and densely rugose, somewhat shining; mesothorax densely punctured, the dorsal lines not well impressed; scutellum flat, punctured; metathorax more coarsely rugose, somewhat reticulated, a

well-defined transverse carina at base, and another one a little behind the middle, slightly arcuated and subobsolete in the middle and more prominent and acute on each side where the tubercles are usually placed; tegulæ black. Wings hyaline, faintly tinged with fuscous; nervures and stigma black; areolet large, subquadrate. Legs rufous, their coxæ and trochanters, except the apical half of the posterior pair, black; posterior femora at tip and their tibiæ dusky, their tarsi white, the extreme base and apex black. Abdomen oblong-subovate, not much longer than the head and thorax, rufous, polished; apical two-thirds of the 5th, and the whole of the following segments, black; on the apical third of the 3rd and 4th segments a transverse, rather indistinct, blackish line; basal segment protuberant at tip, with a well-developed tubercle on each side of the apical third; 2nd segment broad and flattened, the basal foveæ shallow. Length $3\frac{1}{2}$ lines; expanse of wings 6 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

Easily distinguished by its robust form, short abdomen, dense sculpture and white posterior tarsi.

16. *Cryptus pumilus*, n. sp.

Black; smooth, base of antennæ, legs, and abdomen, except 1st segment, rufous; wings subhyaline; basal segment of abdomen black, striated.

Female.—Black, shining; mandibles and palpi testaceous; antennæ more than half the length of the body, rather stout, blackish, the basal third pale rufous. Thorax smooth and polished; scutellum flattened, smooth and polished, with a transverse, striated excavation in front; metathorax with the elevated lines sharply defined, the central area large, reniform and striated obliquely, the posterior declivity rather abrupt and also striated, the lateral tubercles prominent; tegulæ yellowish. Wings hyaline, the anterior pair slightly tinged with fuscous, iridescent; nervures and stigma pale at base, the latter rather large; areolet small, 5-angular. Legs, with their coxæ, entirely pale rufous, the posterior tibiæ at tips, dusky. Abdomen ovate, long and slender at base, somewhat flattened, polished, rufous; basal segment black, long, slender, gradually dilated towards the tip, which is longitudinally striated above, and with two longitudinal carinæ extending nearly the whole length of the segment, the lateral tubercles not visible, the extreme lateral margins at tip, yellow; the following segments together

ovate, apical segment slightly tinged with yellowish; ovipositor very short, rufous. Length $2\frac{1}{4}$ lines; expanse of wings 4 lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

17. *Cryptus subargenteus*, n. sp.

Black, silvery-sericeous; legs and abdomen, except 1st segment, rufous; wings hyaline, iridescent.

Female.—Black, clothed with a very fine silvery-sericeous pile, most obvious on the face; head rather large, transverse; face short and broad; eyes prominent; clypeus, vertex, occiput and cheeks, polished; a spot on each mandible, and the palpi, whitish; antennæ three-fourths the length of the body, slender, brown, tinged with rufous at base and beneath. Thorax polished; mesothorax with the dorsal lines well impressed; scutellum flat, polished; metathorax pubescent, with the elevated lines sharply defined, the central area large, elongate-subquadrate; tegulae pale yellowish. Wings hyaline, faintly tinged with fuscous, iridescent; nervures and stigma fuscous; areolet small, 5-angular or subquadrate. Legs slender, pale rufous, the four anterior coxæ and trochanters whitish, the posterior tibiae and tarsi slightly dusky. Abdomen elongate, slender, strongly arcuated, shining; the 1st segment long, linear, black, polished, slightly dilated at tip, with an obtuse tubercle on each side of the middle; 2nd and following segments together oblong-ovate, subsericeous, rufous, faintly tinged with dusky at tip; ovipositor about as long as the basal segment of the abdomen, rufous, valves blackish. Length 3 lines; expanse of wings 5 lines.

Hab.—Pennsylvania. E. T. Cresson.

Distinguished at once from the other species by the silvery face.

18. *Cryptus pusillus*, n. sp.

Black; most of antennæ, legs and 2nd segment of abdomen, rufous; 1st segment of the latter striated; wings subhyaline.

Female.—Black, polished, slightly pubescent; mandibles piceous, palpi pale; antennæ two-thirds the length of the body, rather short, pale rufous, fuscous towards the tip. Thorax shining, minutely punctured; metathorax with the elevated lines sharply defined, the central area rather large and triangular, and immediately behind it the posterior face is abruptly and deeply excavated, the lateral tubercles prominent; tegulae pale rufous. Wings subhyaline, uniformly tinged with pale rufous, slightly iridescent; nervures and stigma fuscous, the latter

rather large; areolet small, 5-angular. Legs, with their coxæ, entirely pale rufous. Abdomen ovate, flattened, polished, black, the 2nd segment entirely and the anterior margin of the 3rd obscurely, rufous, as well as the lateral margins of the 1st segment, this segment is dilated towards the tip and covered above with fine longitudinal striæ, the lateral tubercles are subobsolete; apical segment slightly tinged with yellowish; ovipositor nearly as long as the abdomen, piceous. Length $2\frac{1}{2}$ lines; expanse of wings 4 lines.

Hab.—Illinois. Dr. Samuel Lewis.

Allied to *C. pumilus*, but only the middle of the abdomen is rufous.

19. *Cryptus frater*, n. sp.

Black; legs and the 2nd, 3rd and 4th abdominal segments, rufous; wings subhyaline; ovipositor short.

Female.—Black, finely sculptured, slightly pubescent; face flat, palpi fuscous; antennæ nearly as long as the body, slender, piceous, tinged with ferruginous towards the middle, the joints distinct, 3rd joint longest, 4th slightly shorter, and the remaining joints gradually shorter. Thorax: mesothorax shining, minutely punctured, the dorsal lines not well impressed, under a strong lens distinctly and closely punctured; pleura and pectus minutely striated, subopaque; metathorax finely rugose, subopaque, near the base a well-defined transverse carina slightly arcuated in the middle, and on each side behind a short carina where the tubercles are usually placed. Wings subhyaline, faintly iridescent; nervures and stigma fuscous; areolet moderate, 5-angular or subquadrate. Legs rufous, their coxæ and trochanters black, the posterior tarsi slightly dusky. Abdomen, oblong-ovate, very slender at base, polished, black, the 2nd, 3rd and 4th segments rufous; basal segment slender, arcuated, its tip piceous, and on each side of the apical third a stout tubercle, between which there is a deep fovea; ovipositor short, not as long as the 1st segment of the abdomen, piceous, valves black. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hab.—Illinois. Dr. Samuel Lewis.

20. *Cryptus subgracilis*, n. sp.

Rather slender, black; antennæ piceous; legs fuscous, the two anterior pairs pale; abdomen rufous, apex black; wings fusco-hyaline.

Female.—Black, slightly pubescent; head densely and finely punctured, face flat, clypeus shining; antennæ nearly as long as the body,

slender, piceous, basal joint black, 3rd joint longest, 4th and 5th subequal, each one-third shorter than the 3rd, the joints distinct. Thorax: mesothorax shining, closely punctured, the dorsal lines obsolete; pleura minutely rugose or striated; scutellum rather convex, punctured; metathorax finely rugose, or somewhat reticulated, a well defined, transverse, arcuated carina at base, and on side behind, an oblique, slightly angular, well defined carina; tegulae black. Wings pale fusco-hyaline, slightly iridescent; nervures and stigma black; areolet large, subquadrate. Legs fuscous, their coxae black, the four anterior tibiae and tarsi tinged in front with obscure yellowish. Abdomen very slender at base, remaining segments together, oblong-ovate, polished, rufous, the 3 apical segments black; basal segment long, arcuated, without lateral tubercles; ovipositor about as long as the 1st segment of abdomen, rufous, valves black. Length $2\frac{1}{2}$ lines; expanse of wings $4\frac{1}{4}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

More slender than *C. frater* to which it is closely allied, but sufficiently distinct.

21. *Cryptus extrematis*, n. sp.

Black: antennae with a broad white annulus; legs and three basal segments of abdomen rufous, large spot on the 6th or 7th segment and the posterior tarsi, white; wings clear; ovipositor nearly as long as the abdomen.

Female.—Black, shining, somewhat robust; head short and broad; antennae as long as the body, slender, black, the 7th to 12th joints white, the 3rd and 4th joints long, the 3rd rather the longest, 5th a little shorter than the 4th, and the 6th about half as long as the 3rd. Thorax finely punctured, the dorsal lines rather deep; scutellum subconvex, polished; metathorax finely scabrous, opaque, its base smoother and shining, the elevated lines tolerably well defined, forming a large, more or less distinct, subrhomboidal central area, lateral tubercles not well defined. Wings faintly tinged with fuscous; nervures and stigma blackish, pale at base; areolet large, subquadrate. Legs pale rufous, the posterior femora and tibiae at tips, and the base and apex of their tarsi, blackish, rest of their tarsi white. Abdomen rather stout, subovate, polished, rufous or yellowish-rufous; basal segment strongly arcuated, broad at tip; the 4th and following joints black, the 6th or 7th or both more or less white above; ovipositor about as long as the body, rufous, valves black. Length 4— $5\frac{1}{2}$ lines; expanse of wings 6— $9\frac{1}{2}$ lines.

Male.—Resembles the female, but much slenderer, the antennæ is more or less yellowish or whitish beneath, the four anterior coxæ are white, as well as the posterior tarsi except extreme tips; the abdomen much more elongate and subcylindric, the basal segment mostly all black, linear, with a projection on each side behind the middle, the 2nd, 3rd and most of the 4th segments are rufous, the 7th, and sometimes the 6th, segment has a rounded white spot above. Length $4\frac{1}{2}$ lines; expanse of wings 7 lines.

Hab.—Mass. (Sanborn); Penn. (Auxer); Delaware (Dr. Wilson).

This is closely allied to *C. nuncius* Say, but is at once distinguished from that species by having the white spot or spots on the apex of the abdomen, otherwise they are very similar.

22. *Cryptus ultimus*. n. sp.

Black; the legs and four basal segments of the abdomen pale rufous, rest of the abdomen black except a large white spot on the seventh segment; wings subhyaline; ovipositor nearly as long as the abdomen.

Female.—Black, shining, robust; head short and broad, entirely black; antennæ rather more than half the length of the body, brown-black, black at base, the 3rd and 4th joints long and subequal, 5th shorter, 6th shorter than the 5th. Thorax densely and finely punctured, opaque, the dorsal lines not deep; scutellum polished; metathorax densely punctured, opaque, the elevated lines tolerably well defined, the lateral tubercles small, acute. Wings slightly tinged with fuscous; nervures and stigma pale fuscous; areolet large, subquadrate or 5-angular, the lower nervure broadly angular, the outer nervure rather shorter than the inner nervure. Legs pale rufous, tips of the four posterior femora and of their tibiæ, black. Abdomen robust, ovate, pale rufous, shining; basal segment arcuated, broad at tip, slender at base, polished; the 5th and apical segments black, polished, the seventh segment above with a large white spot posteriorly, the fourth segment above is somewhat stained with blackish posteriorly; ovipositor nearly as long as the abdomen, rufous, valves black. Length 4 lines; expanse of wings 6 lines.

Hab.—Rocky Mountains, Colorado Territory.

Closely allied to *C. extrematis*, but readily distinguished by its much shorter and entirely black antennæ and by the coloring of the posterior legs.

23. *Cryptus incertus*, n. sp.

Black; antennæ slightly annulated with white; legs and abdomen bright rufous, the 3 apical segments of the latter black, the terminal one with a large white spot above; wings fusco-hyaline.

Female.—Black, finely and densely punctured, subopaque, slightly pubescent; face flat; clypeus shining; mandibles rufous in the middle; palpi piceous; antennæ slender, two-thirds the length of the body, piceous, paler beneath towards the base and again towards the tip, about the middle above a small whitish annulus, 3rd and 4th joints long and subequal, 5th joint shorter, the 6th shorter than the 5th. Thorax finely rugose, the mesothorax indistinctly so, the dorsal lines not well impressed; metathorax more coarsely rugose, or reticulated, near the base a slight transverse carina, and about the middle another one strongly arcuated anteriorly and ending on each side in a prominent flattened ridge or tubercle; tegulæ rufous. Wings subhyaline, uniformly tinged with pale fuscous, slightly iridescent; nervures and stigma fuscous; areolet large, subquadrate. Legs, with their coxæ, bright rufous; tips of the posterior femora black, tips of their tibiæ and of all the tarsi dusky. Abdomen oblong-ovate, strongly arcuated at base, smooth and polished, bright rufous; apical margin of the 4th segment, and the remaining segments entirely, except a large white spot on the 7th segment above, black; ovipositor more than half the length of the abdomen, rufo-piceous, valves black. Length $3\frac{1}{2}$ lines, expanse of wings 6 lines.

Hab.—Delaware. Dr. Thomas B. Wilson.

Closely allied to *C. ultimus*, but the antennæ are longer, with a slight white annulus, the wings darker, and the abdomen not so robust.

24. *Cryptus alacris*, n. sp.

Black; annulus on antennæ and spot on tip of abdomen, white; legs and three basal segments of abdomen, rufous; wings hyaline; ovipositor as long as the abdomen.

Female.—Black, shining, slightly pubescent; mouth piceous, palpi pale; antennæ more than half the length of the body, rather slender, black, with a whitish annulus about the middle, basal joints beneath sometimes pale rufous. Thorax minutely punctured; mesothorax smooth and polished; a line over the collar, sometimes subobsolete, and tegulæ, whitish; metathorax subopaque, minutely rugose, the elevated lines longitudinal and subobsolete, the posterior face deeply excavated,

and sometimes tinged with rufous, lateral tubercles scarcely visible. Wings ample, hyaline, iridescent; nervures and stigma black; areolet moderate, 5-angular. Legs, with their coxæ, entirely rufous, moderate. Abdomen oblong-ovate, slender at base, rather broad and sometimes slightly compressed at tip, shining, the three basal segments rufous, the remainder black, with a white spot at tip above; basal segment gradually dilated towards the tip, without lateral tubercles; ovipositor as long as the abdomen, rufo-piceous. Length $2\frac{3}{4}$ lines, expanse of wings $4\frac{1}{2}$ lines.

Hab.—Delaware (Dr. Wilson); Illinois (Dr. Lewis).

Resembles *C. incertus*, but is much smaller, the antennæ shorter and stouter, the wings clear, ovipositor longer, and the color somewhat different.

SECTION 5.

25. *Cryptus pallidus*, n. sp.

Pale honey-yellow: head black, face rufous; antennæ black with a white annulus; collar, tegulæ and spot on tip of abdomen, white; wings hyaline.

Female.—Pale honey-yellow; head black, most of face, clypeus, and mandibles, rufous; palpi pale; antennæ more than half the length of the abdomen, rather slender, black, with a broad white annulus about the middle, the three or four basal joints, especially beneath, pale rufous. Thorax shining; mesothorax polished; the dorsal lines tolerably well impressed; scutellum slightly convex, polished; metathorax minutely rugose, subopaque, the elevated lines not well defined, longitudinal, the central area very elongate, broad behind and narrowed in front, the posterior declivity abrupt, the carina bounding it above sharply defined, and ending on each side in a short subacute tubercle. Wings hyaline, faintly tinged with yellowish, iridescent; nervures and stigma pale testaceous; areolet 5-angular, moderate. Legs rather slender, color of the body; the coxæ tinged with yellowish. Abdomen about as long as the head and thorax, oblong-ovate, slender at base, faintly compressed at tip; three basal segments opaque, apical segments polished, with an obscure whitish spot at extreme tip above; basal segments gradually dilated towards the tip, without lateral tubercles; ovipositor two-thirds the length of the abdomen, piceous. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Delaware. Dr. Thomas B. Wilson.

PHYGADEUON, Grav.**1. *Phygadeuon major*, n. sp.**

Black; antennæ with a yellowish annulus; legs and abdomen, except base, rufous, apex with a yellow spot; wings subhyaline.

Female.—Black, shining, clothed with a short, fine, yellowish pubescence, more obvious when viewed in profile; face densely and finely punctured; clypeus polished, tinged with rufous, with a deep fovea on each lateral suture, mandibles also tinged with rufous; palpi testaceous; antennæ rather short, stout, involute at tip, black, the 8th to 12th joints yellow, the three basal joints tinged with rufous, beyond the annulus beneath the joints are obscurely ferruginous. Thorax shining, finely and closely punctured, the mesothorax flattened, less distinctly punctured; scutellum polished, obscure rufous, as well as a transverse spot behind it; metathorax rugose, a rather large subquadrate, almost smooth, shining space on each side at base, the elevated lines sharply defined, the central area moderate, 6-angular, posterior face suddenly depressed and bounded above by a sharply defined carina, arcuated in the middle and prominent on each side; tegulæ rufous. Wings hyaline, slightly tinged with yellowish; nervures and stigma ferruginous; areolet 5-angular. Legs stout, rufous; posterior coxæ, except tips, black, their femora and tibiæ at tips blackish. Abdomen stout, about as long as the head and thorax, ovate, highly polished, rufous, base of the 1st segment black, its tip broad, the petiole short and stout, on the apical third two short well defined longitudinal carinæ, and the lateral margins also acutely carinated; apical segment with a large yellow spot; ovipositor short, rufous. Length $4\frac{3}{4}$ lines; expanse of wings 7 lines.

Hab.—Illinois. Dr. Samuel Lewis.

This is the largest species of this genus so far known to me.

2. *Phygadeuon annulatus*, n. sp.

Black; annulus on antennæ, tegulæ, and spot on apex of abdomen, whitish; legs and abdomen, except three apical segments, rufous; wings subhyaline.

Female.—Black, shining; face punctured, the vertex, occiput and cheeks polished; most of the clypeus, the mandibles and palpi, pale rufous; antennæ more than half the length of the body, rather stout, fuscous, tinged with rufous at base and again towards the tip, the 7th to 12th joints white, not so broad beneath. Thorax minutely sculptured, shining; mesothorax polished, somewhat flattened, apparently

impunctured, the dorsal lines tolerably well impressed; metathorax indistinctly sculptured, the elevated lines obsolete, abruptly truncate behind; tegulæ pale yellowish. Wings subhyaline, tinged with pale fuscous; nervures and stigma pale fuscous, paler at base; areolet 5-angular. Legs, with their coxæ, rufous, the posterior tibiæ dusky at tips. Abdomen subovate, somewhat flattened, about as long as the head and thorax, rufous, shining; base of the 1st and the three apical segments, except a pale yellowish spot on the last segment above, black; apical half of 1st segment dilated and truncate, the petiole stout; ovipositor rather more than half the length of the abdomen. Length 3 lines; expanse of wings 5 lines.

Hab.—Delaware. Dr. Thomas B. Wilson.

3. *Phygadeuon cincticornis*. n. sp.

Black, polished; annulus on antennæ and spot on tip of abdomen, yellowish; mouth, legs and three basal segments of abdomen, rufous; wings hyaline; ovipositor long.

Female.—Black, polished, slightly pubescent; most of the face, clypeus, mandibles, except tips, and palpi, dull rufous; antennæ about as long as the head and thorax, stout, black, the three basal joints beneath rufous, the 9th to 12th joints pale yellowish, spotted with blackish beneath, basal joint very robust. Thorax polished, minutely punctured; dorsal lines of mesothorax obsolete; scutellum flattened, punctured; metathorax minutely sculptured, the sides pubescent and shining, the elevated lines tolerably well defined, the central area elongate, narrow; tegulæ piceous. Wings hyaline, slightly iridescent; nervures and stigma black, pale at base; areolet 5-angular. Legs, with their coxæ, entirely rufous. Abdomen elongate, polished, dull rufous, the 4th and following segments black, the apex with a small yellowish spot; basal segments slightly and gradually dilated to the tip, without lateral tubercles; ovipositor as long as the abdomen, rufous. Length $3\frac{1}{2}$ lines; expanse of wings 6 lines.

Hab.—Illinois. Dr. Samuel Lewis.

4. *Phygadeuon montanus*. n. sp.

Black, polished; antennæ, legs and abdomen, dull rufous; wings subhyaline; metathorax deeply excavated behind.

Female.—Black, polished, thinly clothed with pale pubescence; head subquadrate; face, beneath the antennæ, slightly protuberant; mouth

piceous, palpi pale; antennæ short and stout, involute, rufous, with a white sericeous pile. Thorax polished, without distinct punctures; mesothorax flattened, with a few subobsolete punctures on the disk; scutellum flat, with two deep, subtransverse excavations in front; metathorax almost smooth, shining, the elevated lines distinct, the central area large and semicircular, and immediately behind it a very deep, abrupt, arcuated excavation, the carina bounding it in front ends each side in an obtuse flattened tubercle; tegulæ rufous. Wings subhyaline, slightly iridescent, the anterior pair tinged with fuscous, the posterior pair clearer; nervures fuscous, paler at base, stigma black; areolet subquadrate, moderate. Legs thickened, rufous, clothed with a short whitish pile; most of the posterior coxæ and their femora, as well as the middle femora slightly, more or less blackish. Abdomen about as long as the head and thorax, flattened, highly polished, subovate, dark rufous, sides blackish; first segment robust, arcuated, broadly dilated at tip, with a slight tubercle on each side of the posterior third, petiole short and stout; apical segments slightly incurved; ovipositor short, rufous. Length $3\frac{1}{2}$ lines; expanse of wings 5 lines.

Hub.—Rocky Mountains, Colorado Territory.

5. *Phygadeuon vulgaris*, n. sp.

Black; basal two-thirds of antennæ, legs and abdomen, rufous; wings subhyaline; metathorax deeply excavated behind.

Female.—Black, shining, slightly pubescent; head subquadrate, mandibles dull rufous, palpi pale yellowish; antennæ short and stout, basal two-thirds pale rufous, often paler towards the middle, apical third piceous, basal joint robust, elongate. Thorax polished, densely and minutely punctured; mesothorax somewhat flattened; scutellum flat, polished, sparsely punctured, with two deep, slightly transverse excavations in front; metathorax finely rugose, with a polished space on each side at base enclosed by elevated lines, which are tolerably distinct, the central area rather large, transversely and irregularly subquadrate, immediately behind it a very deep, abrupt, arcuated excavation, and on each side of it a prominent, flattened, obtuse tubercle; tegulæ rufous. Wings hyaline, slightly but uniformly tinged with fuscous, faintly iridescent; nervures and stigma fuscous; areolet moderate. Legs, with their coxæ, pale rufous, posterior pair darker and often more or less dusky. Abdomen about as long as the head and

thorax, ovate, flattened, highly polished, bright rufous, the extreme base sometimes blackish and the extreme apex sometimes slightly yellowish and pubescent; basal segment squarely dilated at tip, forming a slight angle on each side about the middle, petiole short and stout; ovipositor about half the length of the abdomen, rufous. Length $2\frac{1}{2}$ — $3\frac{1}{2}$ lines; expanse of wings $4\frac{1}{2}$ — $5\frac{1}{2}$ lines.

Hab.—Penn., Del. (Dr. Wilson); Illinois (Dr. Lewis). Ten ♀ specimens.

This is our most common species; it varies much in size, and the rufous color is sometimes very pale, the antennæ are always black at tips and in some specimens there is a more or less pale annulus, the rufous color at base gradually shading into pale yellowish towards the middle.

6. *Phygadeuon subfuscus*, n. sp.

Black, shining: base of antennæ, legs and abdomen, except base, dark rufous; wings subhyaline: metathorax excavated behind; ovipositor very short.

Female.—Black, polished; head transversely subquadrate, entirely black; palpi pale; antennæ half the length of the body, stout, rufous, gradually shading into fuscous towards the apex. Thorax minutely punctured; mesothorax somewhat flattened, polished and feebly and sparsely punctured; scutellum triangular, slightly depressed, with a transverse, rather deep excavation in front; metathorax finely sculptured, a large shining space on each side at base, the elevated lines distinct, the central area moderate, semicircular, and immediately behind it a deep, abrupt excavation, the tubercle on each side scarcely visible. Wings hyaline, faintly tinged with pale fuscous; nervures and stigma pale fuscous, paler at base; areolet 5-angular. Legs, including the coxæ, rufous, the posterior tibiæ and tarsi dusky. Abdomen as long as the head and thorax, ovate, flattened, polished, dark rufous or rufofuscous; basal segment black, gradually dilated towards the tip, carinated laterally and with a shallow fovea on the disk, petiole rather short and stout; ovipositor subexserted. Length $3\frac{1}{2}$ lines; expanse of wings $5\frac{1}{2}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

7. *Phygadeuon mandibularis*, n. sp.

Black: mandibles, base of antennæ, tegulæ, legs and abdomen, rufous: wings subhyaline: mandibles very large and pubescent.

Female.—Black, shining, slightly pubescent, more dense on the face;

head densely punctured; clypeus very transverse, fringed with pale pubescence, and tinged with dark rufous; mandibles very prominent, long and rather slender, deeply bifid at tips, which are black, the rest rufous and pubescent; palpi pale rufous; antennæ short and stout, involute, rufous at base, yellowish in the middle, and fuscous at tip, the apical third beneath tinged with rufous. Thorax densely and finely punctured; mesothorax and scutellum flattened, the latter with two deep, slightly transverse excavations in front; elevated lines of the metathorax sharply defined, the central area rather large, transverse and irregular, on each side of it are two spaces, the basal one large, somewhat rounded, smooth and shining, the posterior one smaller, oblique, irregular and striated, posterior declivity abrupt, the lateral tubercles scarcely visible; tegulæ rufous. Wings subhyaline, slightly and uniformly tinged with fuscous; nervures fuscous, stigma pale fulvous; areolet 5-angular. Legs, with their coxæ, rufous, pubescent. Abdomen subovate, polished, dark rufous; basal segment gradually dilated towards the tip which is broad and depressed, without lateral tubercles; ovipositor short, rufous. Length $3\frac{3}{4}$ lines; expanse of wings $5\frac{3}{4}$ lines.

Hab.—Illinois. Dr. Samuel Lewis.

Easily distinguished from all the other species known to me by the very prominent mandibles.

Genus **MESOSTENUS**, Grav.

1. **Mesostenus albopictus**, n. sp.

Black, variegated with white markings; antennæ long, with a broad white annulus; legs yellow, posterior pair very long, mostly black; wings hyaline; abdomen banded with white; metathorax with two acute spines or tubercles.

Male.—Black, shining, slightly pubescent; face beneath the antennæ, orbits, very broad behind, clypeus, labrum, base of mandibles, and the palpi, white; antennæ longer than the body, porrect, the 12th to 19th joints white. Thorax black, shining, densely punctured, the dorsal lines deeply impressed; a line on the collar above and sides, a line or spot in front of the anterior coxæ, a round spot on the disk of mesothorax, tegulæ, a broad sutural line before and a spot beneath the forewings, a large, elongate, irregular mark on each side of the pleura, as well as a slightly oblique line just beneath it in front of the middle coxæ, and a large transverse mark immediately behind the posterior wings, all white; scutellum subconvex, shining, punctured, its apex

white as well as a narrow marginal line extending to the base of the posterior wings; the carina on each side in front of the scutellum and a spot on postscutellum, also white; metathorax coarsely and confluent punctured, clothed with pale pubescence, the transverse carina in front sharply defined, the lateral tubercles strongly developed and acute; a broad, elongate mark on each side constricted and pointed before, two short, approximate lines in front of the tubercles sometimes confluent with them, and two broad lines covering the tubercles and extending to the posterior margin where they become confluent with the lateral marks, all white. Wings hyaline, sometimes faintly tinged with fuscous; nervures and stigma black; areolet minute, quadrate. Legs long and slender, especially the posterior pair, pale yellowish; the four anterior coxæ and trochanters and a broad line on the posterior coxæ behind, white; rest of the posterior coxæ, their trochanters at base, their femora entirely, the apical fourth of their tibiæ, and extreme tips of all the tarsi, black. Abdomen short, slender, fusiform, about as long as the head and thorax, black, polished; the peduncle, and apical margins of all the segments, broadly white. Length of body 6 lines, of antennæ 7 lines, of posterior legs 10 lines; expanse of wings $11\frac{1}{2}$ lines.

Hab.—Delaware. Dr. Thos. B. Wilson.

This is a very conspicuous species and readily distinguished by its very elongate antennæ and posterior legs, in which respect it resembles certain species of the genus *Arotes*.

2. *Mesostenus albomaculatus*. n. sp.

Black; antennæ with a broad white annulus; orbits, spot on clypeus and mandibles, a round spot on the disk of thorax and several on the sides, scutellum, two large oval spots on metathorax, and apical margins of the abdominal segments, white; legs pale fulvous, posterior pair varied with black and white; wings hyaline; ovipositor short.

Female.—Black, slightly pubescent; the orbits interrupted behind and very broad on the cheeks, a spot on the clypeus, middle of mandibles and the palpi, white; antennæ rather longer than the body, porrect, black, the 9th to 13th joints white, spotted beneath with black. Thorax densely punctured, the dorsal lines rather deeply impressed in front, obsolete behind; a round spot on the disk of the mesothorax, tegulæ, an elongate spot before and another beneath the anterior wings, a large spot just behind the posterior wings, another on each side of

the pleura and a line on each side of the pectus, white; scutellum polished, with a large white spot covering almost its entire surface, behind it a small transverse spot; metathorax finely scabrous, opaque, the anterior carina well defined, the lateral tubercles prominent but obtuse, on each side posteriorly a large oval white spot covering the tubercles. Wings hyaline; nervures and stigma black; areolet larger than usual, quadrate. Legs pale fulvous, the anterior and middle coxæ, a large spot on the posterior coxæ, an annulus near the base of their tibiæ and their tarsi, except extreme base and apex which are black, white; rest of posterior coxæ and tibiæ and the extreme tips of their femora black. Abdomen robust, ovate, shining, black, densely and finely punctured; basal segment about as long as the second, stout, the apex broad, convex and rather deeply punctured, petiole short and robust, flattened and polished; apical margins of all the segments white, those of the three basal segments broad; apical segments polished; ovipositor short, scarcely half the length of the abdomen, rufo-piceous, valves black. Length 5 lines; expanse of wings 9 lines.

Hab.—Pennsylvania. Mr. George Newman.

More robust than *M. albopictus*, with the posterior legs much shorter. The ornamentation is, however, very different.

3. *Mesostenus thoracicus*. n. sp.

Yellowish-rufous; head, antennæ, mesothorax and pectus, black, with white lines; antennæ with a broad white annulus; ovipositor as long as the abdomen; posterior tarsi ♂, white.

Female.—Head black; orbits, interrupted behind and broad on the cheeks, a large spot on the face just beneath the antennæ sometimes confluent on each side with the orbits, the clypeus, labrum, spot on mandibles, and the palpi, white; antennæ nearly as long as the body, black, the 8th to 13th joints white. Thorax: mesothorax and pectus black, densely and deeply punctured, the dorsal lines deeply impressed; the collar above, tegulæ, a broad sutural line before and a short line beneath the wings, and an oblique line on each side of the pectus, white; pleura yellowish-rufous; scutellum, subconvex, shining, black, its lateral margins and the carina on each side which connects it with the mesothorax, white, having the appearance of a V; postscutellum also black, with a white spot beneath the scutellum; metathorax densely punctured, slightly pubescent, shining, entirely yellowish-rufous, rather

abruptly truncate behind, the elevated lines indistinct, the lateral tubercles small and acute or subacute. Wings hyaline; nervures and stigma black, the latter with a pale spot at base; areolet very minute, quadrate. Legs yellowish-rufous, the four anterior coxæ whitish, the posterior tibiæ sometimes obfused, their tarsi yellowish. Abdomen elongate, subovate, shining, yellowish-rufous; basal segment polished, the apical third quadrate; sometimes the terminal segment is tinged with yellow; ovipositor as long as the abdomen, rufo-piceous, valves black. Length 4—5½ lines; expanse of wings 6½—8 lines.

Male.—Resembles the female, but is more slender, the antennæ are rather longer than the body, the annulus distinct above, but indistinctly defined beneath and yellowish; the face is entirely white; the space between the anterior and middle coxæ is also white; the extreme base of the metathorax is blackish; the four anterior coxæ and trochanters are white, as well as the posterior tarsi, except extreme base and apex which are black; the extreme tips of the posterior femora and most of their tibiæ also black, and the apical segments of the abdomen are sometimes obfused, probably from discoloration. Length 4 lines; expanse of wings 7 lines.

Hab.—N. Y. (Grote); Penn. (Cresson); Delaware (Dr. Wilson).

This species is easily distinguished by its pale rufous color, with the head and mesothorax black variegated with white lines.

4. *Mesostenus gracilis*. n. sp.

Pale yellowish-rufous; head, antennæ and mesothorax black, varied with white; wings subhyaline, iridescent; metathorax unarmed.

Male.—Pale yellowish-rufous, slender, shining; head black; the orbits, interrupted behind, a large spot on the face confluent with the orbits, clypeus, most of mandibles, and the palpi, white; antennæ long, porrect, entirely black. Thorax shining; mesothorax black, the dorsal lines deeply impressed; pectus also black; tegulæ, a sutural line before and a short line beneath the wings, and a line on the collar extending down on each side of pectus, white; anterior part of the pleura stained with blackish and having an obscure whitish spot on each side between the anterior and middle coxæ; scutellum and postscutellum black, polished, the former with its tip and lateral margins narrow white, extending forward upon the lateral carinæ, in the shape of a V; meta-

thorax yellowish-rufous, its base blackish, the elevated lines not well defined, the lateral tubercles wanting. Wings subhyaline, slightly stained with fuscous, iridescent; nervures and stigma fuscous; areolet minute, quadrate. Legs slender, yellowish-rufous, the four anterior coxæ and trochanters white beneath, black above, as well as the posterior trochanters above; posterior tibiæ and tarsi more or less obfuscated. Abdomen elongate and slender, subeylindric, shining; basal segment linear; apical segments polished, slightly obfuscated. Length $3\frac{1}{4}$ lines; expanse of wings 5 lines.

Hab.—Virginia. Dr. Thomas B. Wilson.

Closely allied to *M. thoracicus*, but is much smaller and slenderer, the antennæ are entirely black and the posterior legs are differently colored.

5. *Mesostenus? fulvus*, n. sp.

Fulvous; head black, the face and orbits, white; antennæ black with a white annulus; wings hyaline; posterior tarsi white.

Male.—Fulvous, shining; head black, the face, orbits very broad on the cheeks, clypeus, mandibles and palpi, white; antennæ rather longer than the body, porrect, black, the 11th to 13th or 14th joints white, the basal joint beneath with a white spot. Thorax opaque above, the dorsal lines very deeply impressed and black; tegulæ, a sutural line before and a short line beneath the anterior wings, line on the collar extending down its sides, a line on the pleura in front and a spot before the middle coxæ, white; scutellum slightly convex, fulvous, the lateral carinæ in front white, the space on each side blackish; postscutellum with a fulvous transverse spot; metathorax fulvous, blackish at extreme base, the posterior face tinged with whitish, the elevated lines sharply defined, the lateral tubercles strongly developed, rather obtuse and white. Wings hyaline, iridescent; nervures and stigma blackish-fuscous, the latter with a longitudinal, fulvous line through the center; areolet small, quadrate, the outer nervure indistinct or wanting. Legs fulvous, the four anterior pair yellow in front, the posterior pair very long, somewhat tinged with brown; the four anterior coxæ and trochanters, and the 2nd, 3rd and 4th joints of the posterior tarsi, pure white. Abdomen rather short; a little longer than the head and thorax, subovate, shining, reddish-fulvous; basal segment about as long as the second, apical half broad, convex, petiole short, stout, flattened;

apical segments sometimes tinged with yellowish. Length 3—3½ lines; expanse of wings 6—6½ lines.

Hab.—Illinois. Dr. Samuel Lewis.

This species may not belong to this genus on account of the areolet of the superior wings being incomplete.

Genus **RHYSSA**, Grav.

1. **Rhyssa Nortoni**, n. sp.

Black, varied with ferruginous and spotted with yellow; antennæ black; legs mostly yellow; wings subhyaline.

Female.—Head black; the cheeks and broad frontal orbits, bright yellow, the latter emarginate on each side of the insertion of the antennæ; mandibles black, shining; palpi testaceous; antennæ more than half the length of the body, black, apical joint tinged with rufous. Thorax sculptured like that of *R. lunator* Fabr., black; the mesothorax dull rufous, with the incisures and a line down the middle, blackish; on each side of the collar a large, concave, smooth, polished space, margined above with dull rufous and posteriorly with black; an oval elevated spot on each side beneath the insertion of the anterior wings, the scutellum and postscutellum, bright yellow; metathorax smooth and shining, pale ferruginous above, with the extreme posterior margin and two large spots on each side, bright yellow; tegulæ pale. Wings hyaline, tinged with yellowish, and having a violet reflection in certain lights; stigma dull rufous, nervures black; areolet shaped like that of *lunator*, and connects at its apex with the second recurrent nervure. Legs bright yellow, varied with honey-yellow; coxæ black, the anterior pair brown-black with a small yellowish spot in front; middle and posterior femora obfuscated, their tips bright yellow, their tibiæ honey-yellow; tarsal claws blackish at tips. Abdomen brown above, the basal segment pale ferruginous; on each side of the 2nd and following segments, anteriorly, a rather large ferruginous stain, which becomes confluent on the disk of the 2nd and 3rd segments; a semicircular spot on the apex of the 1st and 2nd segments, a large rounded spot on each side of the three following segments, and a transverse spot on each side of the two apical segments, all bright yellow; ventral segments yellowish-ferruginous, their apical margins bright yellow; ovipositor nearly twice the length of the body, brown-black, polished, valves brown-black,

the grooves white, more distinctly so at tip. Length 13 lines; of ovipositor 25 lines; expanse of wings 22 lines.

Hab.—Rocky Mountains, Colorado Territory.

It gives me pleasure to dedicate this most elegant species to Mr. Edward Norton, the distinguished American hymenopterist.

2. *Rhyssa albomaculata*. n. sp.

Black; antennæ with a broad white annulus; thorax and abdomen spotted with white; legs pale fulvous; wings hyaline.

Female.—Black, shining; the orbits white; antennæ three-fourths the length of the body, black, with a broad white annulus near the tip. Thorax gibbous, the mesothorax transversely rugose, the pleura smooth and polished; a broad line on each side just beneath the mesothorax, a transverse mark on each side of the collar, the tegulae, a spot beneath the wings, and an elongate, slightly oblique mark above and a little before the middle coxæ, all white; sentellum black, its apical half white, slightly emarginate before, also a small transverse white spot behind; metathorax rather smooth at base, transversely aciculate at apex, on each side behind a large white spot, and just beneath a smaller white spot. Wings hyaline, the nervures black, pale at base, stigma also black, with a pale spot at base; areolet minute, petiolated. Legs pale fulvous, the four anterior coxæ with a lateral white spot, the middle ones elongate; posterior coxæ with a white spot at base above; tips of the posterior tibiae and of all the tarsi, dusky. Abdomen black, shining; the two basal segments with an angular white mark on each side at tip; the four following segments with two spots on each side, the extreme lateral ones longitudinal and pointed before; on each side of the 7th segment a broad, oblique, white stripe; ovipositor longer than the body, piceous, the valves black, their extreme tips within, white. Length $11\frac{1}{2}$ lines; of ovipositor $13\frac{1}{2}$ lines; expanse of wings 17 lines.

Hab.—New Jersey. E. T. Cresson.

Very similar to *R. persuasoria* Linn., formerly known only as a European species, but of which I have a ♀ and 2 ♂ specimens from the Rocky Mountains, precisely identical with European specimens with which I have carefully compared them, both ♂ and ♀. The ♀ of *R. persuasoria* differs from the ♀ *albomaculata*, above described, as follows: The antennæ are entirely black, the spots on the pleura are much re-

duced; scutellum with a large subtriangular, white spot at tip; the upper spot on each side of the metathorax is much smaller than the lower one; the wings are slightly iridescent, the areolet much larger, more oblique, and scarcely petiolated; the legs are dark fulvous, the posterior tibiæ and tarsi blackish, the posterior coxæ immaculate, the anterior trochanters are white in front; the abdomen is marked the same, except that the spots on the 7th segment are situated as on the preceding segments.

3. *Rhyssa nitida*, n. sp.

Black; face and frontal orbits white; legs pale fulvous, varied with white and dusky; wings hyaline, iridescent.

Male.—Black, polished; face beneath the antennæ, the frontal orbits not quite reaching the summit of the eyes, and the palpi, white; antennæ two-thirds the length of the body, piceous, paler towards the apex. Thorax: mesothorax coarsely and transversely rugose; pleura and metathorax polished, slightly pubescent; scutellum transversely aciculate. Wings hyaline, iridescent; nervures and stigma fuscous, the former pale at base and the latter with a pale spot at base; areolet minute, oblique and petiolated. Legs pale fulvous; the anterior coxæ and trochanters entirely, the anterior femora in front, their base and apex behind, their tibiæ and tarsi, the middle trochanters, tips of their femora, their tibiæ within, and the basal two-thirds of the posterior tibiæ within, all white; the middle tarsi, tips of the posterior femora, their tibiæ at tips and without, and their tarsi, dusky. Abdomen twice as long as the head and thorax, slender, polished, immaculate above; beneath, the incisures are narrowly whitish. Length 7 lines; expanse of wings 9 lines.

Hab.—Virginia. Dr. T. B. Wilson.

INDEX TO SPECIES.

MESOLEPTUS.

<i>Page.</i>	<i>Page.</i>
affinis.....263	hostilis.....267
annulipes.....257	longicornis.....270
antennatus.....272	major.....257
argentifrons.....261	nigripes.....267
bicolor.....269	obliteratus.....260
compressus.....260	obseurus.....261
concolor.....270	Oxylus.....262
conjunctus.....262	porrectus.....266
decoloratus.....265	subrubidus.....264
dimidiatus.....265	subtenuis.....267
discolor.....271	tibiator.....259
distinctus.....266	unicolor.....271
dubitatus.....259	validus.....258
flavifrons.....269	vicinus.....268
flavirictus.....263	vultus.....268

TRYPHON.

affinis.....277	pedalis.....273
americanus.....276	pleuralis.....275
analisis.....279	rufocinctus.....280
capitatus.....281	seminiger.....278
carinatus.....273	semirufus.....278
festivus.....279	submarginatus.....274
limatus.....274	tibialis.....280
minimus.....281	trifasciatus.....276

CTENISCUS.

clavatus.....284	mediatus.....282
dorsalis.....282	orbitalis.....283
flavicoxæ.....283	

EXOCHUS.

apicalis.....285	pallipes.....287
dorsalis.....286	pleuralis.....286
fulvipes.....285	pygmæus.....285
lævis.....286	

TROGUS.

flavipennis.....	287
------------------	-----

HOPLISMENUS.

thoracicus	288
------------------	-----

CRYPTUS.

alacris.....	306	pallidus.....	307
albitarsis.....	300	persimilis.....	298
americanus.....	297	proximus.....	290
crassicornis.....	292	pumilus.....	301
excelsus.....	293	pusillus.....	302
extrematis.....	304	robustus.....	289
frater.....	303	similis.....	299
incertus.....	306	soror.....	296
iridesceus.....	296	subargenteus.....	302
juncus.....	295	subgracilis.....	303
limatus.....	298	ultimus.....	305
luctuosus.....	290	velox.....	293
nubilipennis.....	291		

PHYGADEUON.

annulatus.....	308	montanus.....	309
cineticornis.....	309	subfuscus.....	311
major.....	308	vulgaris.....	310
mandibularis.....	311		

MESOSTENUS.

albomaculatus.....	313	gracilis.....	315
albopictus.....	312	thoracicus.....	314
fulvus.....	316		

RHYSSA.

albomaculata.....	318	Nortoni.....	317
nitida.....	319		